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In This Issue

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*Earnings in bituminous-coal
industry*

*Wage structure in deep-sea
shipping*

Productivity of railroad labor



U. S. Department of Labor

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MONTHLY LABOR REVIEW

JULY 1937

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HUGH S. HANNA, *Editor*

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MONTHLY LABOR REVIEW

FOR JULY 1937

This Issue in Brief

Migratory Labor

THE interstate migration of workers creates social problems of very great significance. During the decade 1920 to 1930, probably more than 4½ million persons (excluding immigrants from abroad) migrated across State lines at least once. The depression of the early 1930's, combined with the midwestern droughts of those years, accentuated certain types of migration, and brought to acute attention the problems arising from the influx into more favored States and communities of thousands of jobseekers from the outside. A report of the Secretary of Labor summarizes the available material on this subject and suggests certain lines of study for the future. Page 3.

Collective Bargaining, Men's Clothing

AN AGREEMENT was signed with Hart, Schaffner & Marx in 1911. Since then the Amalgamated Clothing Workers has extended its contracts with employers to cover 85 percent of the workers in the men's coat and suit industry. During the N. R. A., the Amalgamated became firmly established in the shirt industry and in March 1936 absorbed the Journey-men Tailors of America. Amalgamated agreements usually make union membership a condition of employment. Hours are generally limited to 36 per week in the men's coat and suit industry and to 40 per week in shirt manufacturing, while more than half of the custom and alteration tailoring agreements provide for the 40-hour week. Page 17.

Annual Earnings in Coal Mines

WAGE earners in bituminous-coal mines earned an average of \$917 in 1935. Those who secured some work in each month of the year, however, received an average of \$1,146, and those whose work was spread over 9 months or more earned an average of \$1,045. These figures refer only to earnings of individuals in particular establishments and do not include possible earnings from other sources during the periods in which the individual was not employed in the mine to which he was normally attached. Page 29.

Earnings of Deep-Sea Seamen

THE "signing on" monthly rates in deep-sea shipping show extremely wide variations, ranging from less than \$15 per month in the case of orientals in the stewards' department of Pacific passenger vessels to as much as \$425 in the case of the masters of vessels. In total, 7.3 percent of the employees covered by the Bureau's survey received less than \$40 per month and 4.5 percent received \$180 per month and over. Cash payments for overtime were found to be a regular practice on the Pacific coast, while in the other regions it is customary to grant compensatory time off for overtime. Page 38.

Railroad-Labor Productivity

AVERAGE man-hour output of employees of class I steam railroads, excluding principal salaried employees, increased 81 percent from 1916 to 1936

and 33 percent from 1926 to 1936. Much of the increase accompanied the recent upturn in business, although in 1936 the amount of revenue traffic was still 26 percent less than in 1926. The main causes of the increased productivity are to be found in a wide variety of technological changes. These changes and the depression most seriously affected the unskilled groups, such as track and roadway section laborers. Page 78.

Man-Hour Output in Leather Industry

LABOR productivity per man-hour in the leather industry increased about 25 percent between 1923 and 1935, according to a recent survey by the Bureau of Labor Statistics. The increase in production in recent years was so nearly balanced by the decrease in the hours of work that there was no considerable displacement of labor. Page 68.

Labor Turn-Over

THE wastage involved in excessive labor turn-over is strikingly shown in a review of the experience of 16 important industries over a 7-year period, from 1930 to 1936. Thus, in 1 year the brick industry had a separation rate of 139 and an accession rate of 92 per 100 employees on its pay rolls. This means that to fill each 100 jobs 139 employees were dropped and 92 new ones taken on. In contrast, the rubber-tire industry in no year showed a separation rate in excess of 32 per 100 employees and in 1 year showed a separation rate of less than 17. Similar wide differences occurred in the case of quit rates, which refer to employees who voluntarily resign their jobs. Page 154.

Income of Michigan Workers

EMPLOYED workers in Michigan had a median income in 1934 of \$840, male workers averaging \$912 and female

workers, \$583. The workers reported in the 35-44 age group received the highest median income—\$1,023—the figure for males being \$1,084 and for females, \$710. The median income for the 15-24 age group was \$480 and for the wage earners 65 years of age and over, \$576. Page 200.

Restriction on Employment of Aliens

THE employment of aliens is restricted in 18 of the Latin-American republics by means of laws requiring that a specified proportion of the employees in an establishment must be nationals. The required proportions of nationals vary from 50 percent in Cuba to 90 percent in Mexico. In six republics the proportions of the pay roll to be paid to aliens are also limited. All these laws have been enacted since 1925. Page 114.

Efficiency of W. P. A. Workers

SKILLED workers on W. P. A. projects were found in general to be of high caliber, in a series of efficiency tests conducted by the Works Progress Administration covering brick and stone masons, carpenters, and painters in 7 cities. The tests were conducted by two examiners, one a representative of the union concerned and one a member of the engineering staff of the W. P. A. Of the total workers examined, 78 percent were graded by both examiners as passable or better as regards quality of work and 79 percent were so rated as regards quantity of work. Page 101.

Minimum-Wage Law of Ontario

THE Ontario Minimum Wage Act of 1937 covers both male and female workers except farm workers and domestic servants. The Industry and Labor Board of the Ontario Department of Labor is charged with the administration of the act. Page 131.

Special Articles

A SURVEY OF LABOR MIGRATION BETWEEN STATES

By N. A. TOLLES, *of the Bureau of Labor Statistics*

A CONTRADICTION between the existing need for a free movement of workers and the widespread discrimination against the worker who migrates is revealed by a recent survey of the Department of Labor. The Secretary of Labor has recently submitted the findings of this survey to the Congress, in response to a Senate resolution. Information as to the migration of workers within the United States is exceedingly fragmentary. The lack of any special appropriation for investigating this complex subject prevented the collection of sufficient data to warrant specific recommendations at this time. However, the studies of the Bureau of Labor Statistics and the Children's Bureau were sufficient to show some of the national economic problems which give rise to migration, the distress of large numbers of migrant workers, and the acute problem of the communities with which migrants come into contact.

Social Problems

The living conditions of migrants, as observed recently by representatives of the Children's Bureau in visits to a number of communities, have been characterized by the Secretary of Labor as "a threat to the development of good citizens." These conditions are accentuated by the prejudice of local communities against migrant workers. The extreme unwillingness of some communities to assimilate the migrant is evidenced most strikingly by border controls of doubtful legality and by fitful campaigns to enforce strictly the local vagrancy ordinances. It is also reflected in the difficulty experienced by relief authorities in obtaining funds for the relief of migrants who are in need. The living facilities of most migrant workers were found to be deplorable and in many cases they were shocking. Families with as

many as six children were seen traveling in old cars and trucks, with all their household goods, sleeping at night by the roadside, in squatter camps, or crowded into cheap one- and two-room cabins in tourist camps. Unattached men characteristically hitched rides on railways or highways and slept in "jungle" camps or in the congregate shelters maintained by relief agencies. Occasionally, labor camps were provided for migrant agricultural workers, but even these were frequently crowded, inadequately equipped, and insanitary.

The Children's Bureau found that the migrant worker suffers in comparison with the resident as regards health protection and educational opportunities. The lack of medical care and health protection is a menace to the communities which receive migrants as well as to the workers themselves. The ordinary health services of the community are seldom available to persons without legal residence except in extreme emergencies, and even then such aid sometimes comes too late. Few communities attempt to control venereal and other infectious diseases among the migrants. The children of thousands of migrant families, particularly among migrant agricultural workers, have few or no educational opportunities. Extreme economic pressure upon the family, the difficulty of adjusting school work to brief stops in different communities, and the indifference of some school authorities, appear to be responsible for this condition. Children old enough to go to work in the fields are expected to do so. Younger children are not enrolled because it does not seem worth while to their parents during a short stay. All children of migrant families are overlooked by some school authorities, who are frequently lax in enforcing the school-attendance laws in such cases.

Public relief is granted in most communities only to those persons who have legal settlement. The periods of local residence required to gain settlement, and the periods of absence before settlement is lost, are utterly unstandardized. As a result of this lack of uniformity in settlement laws and of the long periods required to obtain settlement in some States and local districts, many workers lose settlement in one place before acquiring it in any other. No community will acknowledge responsibility for such persons, although they may have lost settlement in the attempt to find employment, to follow the job, or to move where they believed there would be a better demand for their labor. Persons in need but without settlement were admitted to relief under the Federal transient program from 1933 until September 1935. Since the liquidation of this program, relief for migrants has been sharply restricted. Such local relief as is available has been generally limited to families with young children, to unattached women, and to the sick and aged. The attempts of both public and private relief agencies to discourage migrants from applying for assistance make it impossible to know even how many are now in need.

Even under the recent laws to provide for the security of workers, the interstate migrant is in danger of facing discrimination. While the system of outright grants under the Social Security Act has somewhat relaxed the residence conditions of public assistance based on Federal aid, the worker who moves between States is likely to find himself at a disadvantage in respect to all other features of the social-security laws. Agriculture, which probably employs the majority of these workers who must move continually, is outside the scope of both the old-age and the unemployment protection of the act. Seasonal workers, even when employed in industrial work, are inadequately covered in most of the State unemployment-compensation laws. All workers now stand to lose whatever right to unemployment compensation they may have accumulated if they migrate from one State to another, unless special arrangements to cover such cases are successfully established by future interstate agreements.

In order to attack this distress among migrants and this discrimination against the migrant, it is important to know who the migrants are, why they migrate, approximately how many there are, and how successful they are in obtaining remunerative employment. These subjects were the chief concern of the Bureau of Labor Statistics in preparing material for the Secretary's report, and they are the chief concern of this article. The Bureau's analysis was necessarily based largely on data already assembled, supplemented by such inquiries as could be made under limited, regular appropriations.

In accordance with the terms of the Senate resolution the emphasis of the Secretary's report was upon workers who migrate across State lines. It should be noticed, however, that workers who move within their respective States migrate for similar reasons and often share the same conditions as those who happen to cross a State border.

Characteristics of Migrants

No single type of person can be found who is typical of migrants generally. Workers of all races and all ages, whether single or married, become migrants when movement is necessary to find work or to regain health. Certainly the popular picture of the "hobo"—a foreign, single, irresponsible, unemployable drifter—is not characteristic of the mass of migrants today. Indeed, the available evidence suggests that an increasing proportion of the workers who move from State to State are native white Americans, members of families, relatively young, and highly employable.

The virtual disappearance of immigration from abroad, reflected in a decline from an average of 430,000 admissions per year in the 1920's to less than 36,000 in each year of the 1930's, has made it inevitable that the burdens of migration should be borne by native workers. More than 94 percent of the migrants who received aid under the

Federal transient program, 1934-35, were native-born persons. Although Mexicans predominated until recently among the migrant workers of the far West, nearly nine-tenths of the 87,302 migrant workers actually counted as they entered California during the year, 1935-36, were white persons.¹ For the present, at least, the northward migration of the Negro is also of much less importance than during the 1920's. An indication of this latter trend is furnished by a recent analysis of registrations at the public employment offices in Chicago, a city well situated to reflect the trend of Negro migration. While Negroes comprised 31.4 percent of the Chicago immigrants studied who arrived in the 1920's, they comprised only 21.5 percent of those who arrived in the years 1934 to 1936.

Most of the migrants are still probably unattached men. Migration is easier for single men than for women, minors, or family groups, because the single man lacks the social ties and responsibilities of these other persons. However, the migrant family is of increasing importance. One-third of the most recent group of migrant workers whose employment-office records were studied in Chicago were married, nearly one-half had dependents, and more than one-quarter had two or more dependents. Although formerly nearly all of the seasonal migrants in agriculture were single men, a large proportion of such workers in Florida, and nearly all of those who have been counted recently at the California border, were members of family groups.

The common picture of the migrant as an unemployable drifter appears to be the result of sheer provincial prejudice. Repeated studies of the Bureau of Labor Statistics have shown that the ages of greatest employability range approximately from 21 to 45 years.² While about 40 percent of the working population of the United States in 1930 fell outside these age limits, less than 30 percent of the migrants aided by the Federal transient bureaus and less than 22 percent of the Chicago immigrants since 1922 who registered at the public employment offices were under 21 or over 45. Moreover, there is positive evidence as to the employability of workers who migrate across State lines. Nine-tenths of the relief cases under the Federal transient program were judged to be capable and willing workers, and under the final test of ability to obtain jobs in private industry the migrant workers appear superior to resident workers. So far the Bureau of Labor Statistics has been able to analyze partially the material from the public employment offices of only 1 city out of the 20

¹ *Monthly Labor Review* for December 1936 (p. 1362). Nativity was not reported.

² See *Monthly Labor Review* for November 1932 (pp. 1009-1010), and February 1937 (p. 325); U. S. Bureau of Labor Statistics Bull. No. 620 (p. 37), and Bull. No. 623 (p. 87). An exception was found in the department stores of Springfield, Mass., where Dr. Hewes revealed that from one-fifth to one-fourth of the employees were over 45 years of age. Con-

siderably more than half of this older group had been hired before they reached the age of 45 years, but since the largest number of them had been hired at ages from 40 to 44, it was concluded that there was "abundant evidence of lack of prejudice on the part of retail-store managers against the hiring of older persons." (*Monthly Labor Review* for October, 1932, pp. 774-778.)

centers from which information was collected for the Secretary's report. In Chicago, private placements were secured for 24 percent of the migrants of 1934-36, as compared with nonrelief placements of only 7 percent of the earlier migrants who had established residence in Chicago. Among both the single and the married job seekers and among job seekers of all age groups, the recent migrants in Chicago secured jobs in private industry through the employment offices more frequently than did the earlier migrants who had established residence. So great was the preference for residents in assignments to relief work, however, that only 33 percent of the recent migrants to that city (1934-36) secured any kind of placement, as against 41 percent of the former migrants who had established residence.

Types and Numbers of Migrants

Migration is a normal process of adjustment to changes in economic opportunities. The causes of migration are so fundamental and pervasive as to leave little hope that workers may be completely immobilized and little justification for discrimination against the migrants themselves. A consideration of these causes also suggests the need for restoration of stranded communities, for regularization of employment, and for intelligent direction of the necessary movement. Although each case of migration is, in some respects, unique, there remain two broad reasons for movement and two corresponding types of migrant workers:

(1) Major economic changes, such as industrialization, drought, and depression, which displace workers in certain areas and force their relocation in other parts of the country. The workers who move in response to such fundamental shifts in opportunity may be called "removal migrants."

(2) Seasonal and irregular fluctuations in the local demands for labor in agriculture or industry, which require many workers in certain seasons but fewer workers in the same area at other times of the year. The workers who move once or more each year may be called "constant migrants."

The relocation of removal migrants from one State to another affects more workers than does continual migration. No basis exists for an accurate estimate of the number of migrants, but census data suggest that more than 9 million persons moved across State lines at least once during the decade 1920-30. Of these, 4.3 millions were immigrants from abroad and more than 4.6 millions were domestic migrants. The annual number of domestic migrants increased during the depression. One indication of this increase is the increasing number of accidents to trespassers on the railways. More adequate local relief since 1932 has tended to stabilize the population, and to induce some migrants to return home rather than to continue their

rather futile wandering in search of work or relief. Business recovery reduced still further the numbers of these depression migrants. But even today the floating population in search of work appears to be somewhat greater than during the 1920's.

In spite of the increase in internal migration, the total annual volume of relocation since 1927 is probably no greater than during the decade of the 1920's. Fragmentary information from samples of employment-office records suggests that the number of domestic migrants may have doubled since 1929. This increase in the number of workers moving from one State to another has been offset by the almost complete disappearance of relocation of another kind, the relocation of workers from foreign countries. The shift of the burden of migration from foreign to domestic workers, the concentration of migrants in certain localities, and the difficulty of absorbing or relieving them during a depression have drawn attention to the migration problem, although there has been no proof of any increase in its aggregate size.

Compared with the number of removal migrants, the number of workers who move continually in search of work is relatively small. Paul S. Taylor has recently estimated the number at between 250,000 and 300,000. The constant seasonal migrant is nevertheless worthy of special attention, because the burdens which are borne temporarily by the removal migrant may be part of the regular conditions of life for the constant migrant. Moreover, the worker who moves from one State to another in search of permanent relocation often becomes a constant migrant if he fails to find a satisfactory source of livelihood in any one place. This has been the fate of tens of thousands of recent removal migrants from the drought area. They are to be found wandering constantly through the far West in the attempt to eke out an existence by means of short and scattered bits of employment in different places.

Relocation From Farm to City

The dominant migratory trend within the United States in the twentieth century has been the movement of workers from farm to city. During the decade 1920-30, the urban areas gained a net total of 6.3 million persons from the farms. Some of this movement took place within the States, but the interstate migration which did occur in that decade was evidently dominated by this farm-to-city movement. Nine-tenths (92.8 percent) of the net outflow of population during the decade (2.8 millions) was from the following 26 of the 31 States which lost more population than they gained by migration. Each of these States had more than the average proportion of its gainful population engaged in agriculture at the opening of the decade.³

³ In 1920, 26.3 percent of the gainfully employed of continental United States were occupied in agriculture, forestry, and fishing. Of the States of net inflow, only Florida, Texas, Oregon, and Arizona had a larger proportion occupied in this agricultural group (see U. S. Bureau of the Census, *Census of Population, 1920*, Washington, tables 13, 14). These 4 States were developing areas, discussed below.

Georgia.	Mississippi.	Louisiana.
South Carolina.	Kansas.	New Mexico.
Virginia.	Nebraska.	Vermont.
Arkansas.	North Dakota.	Colorado.
Kentucky.	Missouri.	North Carolina.
Iowa.	Idaho.	Wisconsin.
Alabama.	Oklahoma.	Wyoming.
Tennessee.	South Dakota.	Montana.
Minnesota.	Utah.	

More than half (55.6 percent) of the net inflow of population (5.9 millions) went into the following 10 States, each of which had above the average proportion of its population in manufacturing and trade at the end of the decade:⁴

New York.	Ohio.	Indiana.
Michigan.	Connecticut.	Rhode Island.
Illinois.	Massachusetts.	Maryland.
New Jersey.		

The farm-to-city movement dwindled after 1929, as farms promised at least a chance to obtain a bare subsistence, which was lacking for many workers in the cities. Only in 1932 was there a net migration from cities back to the farms, however, and then the net farm immigration involved only 266,000 persons. With the first signs of adequate urban relief and of business recovery the farm-to-city movement was resumed, and by 1936 the rate of this net migration was nearly 450,000 persons per year, or, more than three-fifths of the corresponding average movement of the 1920's.

This type of interstate removal has been a necessary adjustment to the restriction of agricultural opportunity in the South and West and to the growing industrial opportunities in the Northeast. There is no doubt that the result of this removal was to improve the position of the interstate migrants themselves. Carter Goodrich, who has pushed the analysis of this migration into a study of individual counties, concludes that during the 1920's⁵—

In general, the poorer regions gave up population to the richer ones and within sections it was the more prosperous communities—largely urban and industrial—which drew people from the surrounding areas. If even the best of the agricultural counties usually gave up part of their population surplus, they at least lost in smaller proportions than the less favored ones.

⁴ Gains by migration were made by a total of 17 States and the District of Columbia. The first 5 States listed obtained 52.2 percent of the total net inflow from other States and from abroad. In 1930, 44.8 percent of the gainfully employed of continental United States were engaged in manufacturing and mechanical industry or in trade (U. S. Bureau of the Census, Fifteenth Census, 1930, Unemployment, vol. I, Washington, pp. 54-55). In addition to the 10 States listed, California had 46.1 percent of its gainful population engaged in manufacturing and trade, but since less than the average proportion were

engaged in manufacturing alone, California is discussed as a case of general rather than industrial attraction. Of the 31 States of net outflow, only Pennsylvania and New Hampshire had more than the average proportion of their gainful population in manufacturing and trade. These States are listed below as under the cases of declining areas.

⁵ Goodrich, Carter; Allen, B. W.; and Hayes, Marion. *Migration and Planes of Living*. Philadelphia, University of Pennsylvania Press, 1935 (pp. 4-5).

It is probable that the average earnings of all workers were increased by at least 5 percent during the decade 1920–30, as a result of the transfer of workers from agricultural to urban employments.⁶

Relocation from Declining to Developing Areas

The rapid development of the United States would have been impossible except for an extreme mobility of workers. As new areas develop and old ones decline it continues to be necessary for workers to migrate across State lines to develop the new resources and to relieve the older communities of surplus population. The westward movement across the United States was actually larger in volume during the 1920's than in any previous decade. Apart from the 26 distinctly agricultural States mentioned above, there were just 5 States, all in the East, which lost more population than they gained by migration from 1920 to 1930:

<u>Pennsylvania.</u>	<u>Maine.</u>	<u>New Hampshire.</u>
<u>West Virginia.</u>	<u>Delaware.</u>	

Apart from the 10 industrialized States previously listed, 7 States and the District of Columbia received a net immigration during the 1920's:

<u>California.</u>	<u>Oregon.</u>	<u>District of Columbia.</u>
<u>Florida.</u>	<u>Washington.</u>	<u>Nevada.</u>
<u>Texas.</u>	<u>Arizona.</u>	

Six of these eight areas are located in the most newly developed section of the country, the far West. The other two, Florida and the District of Columbia, although not located in the western region, were also developing rapidly. Together, these eight areas obtained 48 percent of the net interstate and foreign inflow of peoples, and California alone received one-quarter of this net migration.

Stranded areas develop as the result of too little emigration from an area where resources are depleted and, where the increase of population outnumbers the local opportunities, or from areas which former industries have left. The cut-over forest region of northern Minnesota, Wisconsin, and Michigan illustrates the case of depleted resources. West Virginia and the southeastern region in general illustrate the pressure of population. The Pennsylvania coal fields, the Delaware powder plants at the close of the Great War, and the textile and shoe towns of New England furnish various illustrations of the need for the migration of workers after industry has shifted out of a given area. A striking current illustration of this need for migration

* No exact calculations are available for the whole decade 1920–30, but Paul H. Douglas shows that a 6-percent increase in real earnings was attributable to such a transfer during the 11-year period 1914–26. (*Real Wages in the United States, 1890–1926*, Boston, Houghton-Mifflin, 1930, p. 395.) The calculation

given by Douglas also necessarily omits the effect of migration of farm operators. Moreover 5 of these 11 years fell in the war-time period when the contrast between earnings in agriculture and in industry were less marked than during the 1920's.

is to be found in Manchester, N. H., where the Amoskeag mills, formerly employing 11,000 workers, are now shut down. Some cases of job relocation appear to be socially unnecessary, as when industry moves to seek lower wage scales or local tax preferences. There is considerable evidence of such shifts in work opportunities—whether of entire plants or not—since the abandonment of the N. R. A. codes.⁷ But whether the reasons for the migration of industry are fundamental or artificially induced, migration of workers is clearly desirable once the shift in employment has occurred. Migration gives rise to fewer problems than does the continuance of the stranded communities when there has been insufficient migration.

Relocation of Drought Refugees

A special case of migration is the flight of peoples from the drought-stricken areas of the Great Plains. Actual counts at the California borders have revealed that 78,491 distressed persons from the States of the Great Plains entered that single State during the 21 months June 1935 to March 1937. It is probable that the total exodus has exceeded 200,000 persons, and the volume of this interstate migration is still increasing. Some of those who moved to the Pacific Northwest have been able to relocate successfully on new farms, but in California, where the majority of these refugees went, most of them have been found to become constant seasonal migrants without residence in any one community and without steady employment anywhere.

This exodus from the Great Plains is clearly desirable, in spite of the distress of the refugees. Indeed, the danger is that the movement may cease with a temporary return of good rainfall. The exodus of the 1930's was needed to correct the misguided development of this area in the 1920's. Conversion of land adapted to light grazing into land devoted to the raising of speculative crops involved the plowing up of much of the soil and the overgrazing of the rest. The return of dry seasons after 1933 enabled the wind to complete the destruction. At least 15 percent of the Great Plains has now been damaged severely by dust storms, and the economic value of more than 1 percent has been permanently destroyed. The minimum reconversion of this land to grazing, which has been recommended by soil experts, would require as many more people to move out as the number which has already left, and a complete return to grazing would displace 900,000 people. To return this area to its best economic use, emigration from the Great Plains would have to proceed continuously at the present rate for more than a decade.

⁷ See *Monthly Labor Review* for April 1937 (pp. 828-858): *Average Hourly Earnings in Manufacturing, 1933 to 1936*, by A. F. Hinrichs.

Relocation of Displaced Farm Tenants

The greatest potential source of future migration in the United States is to be found among the tenant farmers of the southeastern Cotton Belt. The thousands of former tenants now to be found seeking casual jobs in Florida may be only the forerunners of much greater numbers of both white and Negro migrants.

Tenancy in the Old South is the successor to the slave system. Both institutions were, in different ways, devices for holding on the land, on a subsistence basis, sufficient labor to meet the maximum seasonal requirements of agriculture. As a result, the Southeast is now drenched with labor and is therefore especially vulnerable to all forces which may cause the displacement of workers. The depression, followed by the crop-restriction program, has already forced some displacement of tenants. Much greater displacements may be caused in the near future as a result of technical developments. If the mechanical cotton picker is perfected, most of the demand for tenants and wage workers in the eastern Cotton Belt may be eliminated. But apart from the cotton picker, the spread of improved methods already in use is likely to cause considerable displacement. Mechanical equipment and the use of check-row planting are capable of eliminating much of the labor requirement for cotton raising, except in the picking season. It is questionable whether the landowner of the Old South will continue to provide subsistence the year round for workers who are needed only during a brief season. To compete with the rapidly developing areas of the West and of foreign countries, the plantation of the Old South may be forced to adopt its competitors' method of hiring workers only during the season when their labor is required. In that case a large fraction of the 1 million tenants of the old Cotton Belt may be converted into constant migrants from job to job or displaced from agriculture altogether.

Seasonal Migration

As long as employers demand much more labor in one season than another, workers must migrate or find some alternative means of subsistence in the local area. In agriculture, and especially in the raising of specialized truck and orchard crops, the labor requirement is small throughout most of the year but very heavy during the harvest. Mechanization, which has eliminated most of the need for migrants for the wheat harvest, is difficult to apply to the harvesting of fruits and vegetables. The dovetailing of various local jobs, which is sometimes possible in populous areas of varied employments, has a very limited applicability in the sparsely populated rural areas of the West. The alternation of direct, productive work on various crops with maintenance work, as on the one-family farm, is not profitable

when agriculture becomes highly specialized and highly capitalized, as in California. For these reasons, much of the agriculture of the far West is utterly dependent on the migration of workers to meet peak labor requirements in different places. Workers may be immobilized only if wages during the peak season are sufficient for annual subsistence, which is not the present case, or if relief is granted freely during the slack season.

The greatest and most incessant migration of workers in the United States centers in California. The agriculture of that State was estimated to require in 1935 at least 41,000 workers from outside the counties where they were employed.⁸ Because of the inefficiencies of recruitment, the incomplete mobility of workers, and the preferences of employers for various types of workers, more than 150,000 persons divide the employment which now actually requires perhaps 50,000 workers.⁹ There are few signs of a decline in the use of migratory workers. Some displacement is occurring in the packing of lettuce, but a very rapid expansion of cotton acreage on newly irrigated land may require 10,000 additional migrant workers in the near future. Moreover, the availability of drought refugees encourages the perpetuation of the system of using migrant workers.

Other agricultural areas which now use migrant workers are the cotton and vegetable areas of the Southwest, the apple, hop, and berry regions of the Pacific Northwest, the pea fields of Idaho, the beet fields of Colorado, Wyoming, Montana, and Idaho, the berry fields of Arkansas, and the citrus and vegetable areas of Florida. Not all of these migrants move across State lines, but in each case there appear to be significant numbers who must go across some State border to seek employment. In most areas the numbers of interstate migrants are not known, even approximately, but the recent counts of workers arriving in California by car give some clue to one portion of this constant interstate movement. During the calendar year 1936, 12,839 workers "in need of manual employment" entered California from other States in cars bearing California licenses. Since there was no advantage in securing the relatively expensive California license, except for workers who had previous residence in that State, all of these persons may be safely counted as seasonal migrants. A large proportion of the 6,685 persons entering in cars with Oregon and Washington licenses and some of the 15,683 from Texas and Arizona were probably also seasonal workers.

Very little is known concerning the seasonal migration of industrial workers during recent years. All that can be said with confidence is that the conditions of work in the lumber camps of the Pacific North-

⁸ California State Relief Administration. Survey of Agricultural Labor Requirements in California in 1935. San Francisco, 1936 (pp. 24-27).

Migratory Farm Labor in the United States, by Paul S. Taylor; and California State Relief Administration, Migratory Labor in California, San Francisco, 1936 (p. 47).

⁹ Monthly Labor Review for March 1937 (p. 540).

west, in the construction industry in all isolated places, in the canning and packing sheds in many places, and on the ships of the Great Lakes, are such as to encourage the migration of workers. John N. Webb has been able to trace the interstate routes of some of these industrial workers who received aid from the Federal Transient Bureaus.¹⁰

Employment and Earnings of Migrants

The migration of workers, even when necessary, is largely unguided and in individual cases it is often misdirected. The exodus from many stranded areas has been inadequate, and during the recent depression the areas of greatest population pressure actually received workers from the cities. At the same time there has often been too rapid and too concentrated a flow to permit absorption in particular communities.

Rarely does any type of migrant have the assurance of employment until after he has moved. Our present system of unsystematic recruitment of labor is particularly disastrous for the constant seasonal migrants, who can hope at best for only a few weeks of work in any one place. Advertising, which may be a useful device to direct certain resident workers to specific jobs, is apt to cause great misery to migrant workers by overstimulating the movement to particular areas. A beginning in rationalizing the flow of labor has been made by the public employment offices under the United States Employment Service, but these offices are hampered by the refusal of many agricultural workers to register and by the pressure of local communities against any systematic attempts to import workers who may later have claims to public relief.

Very little is known concerning the regularity of employment or the comparative earnings of the removal migrants who seek permanent relocation. Information from the pre-war period of heavy foreign immigration and from a recent study of southern whites in Cincinnati¹¹ suggests that the newly arrived workers usually earn more than they earned in the areas which they leave, but that they are the last to be hired and the first to be laid off and that they earn less than similar workers who have stable residence in the areas to which these migrants go. A somewhat different result was obtained from a recent tabulation of data relating to 409 workers registered at the Chicago Public Employment Offices who moved in various years after 1922. Twelve percent of them moved into higher occupational classes, but 22 percent moved down into occupations of lesser skill than before migration. However, nearly half of these migrants had moved during the depres-

¹⁰ See Works Progress Administration, Division of Social Research, Monograph VII: *The Migratory Casual Worker*, by John N. Webb, Washington, 1937.

special census of Hamilton County, Ohio, of April 1935, by Grace G. Leybourne, city manager of Cincinnati, and the Regional Department of Economic Security.

¹¹ Data from a forthcoming study based on the

sion, and it is therefore probable that the alternative for many of them at the time of migration was complete unemployment at home.

Data as regards the employment and earnings of constant seasonal migrants are also inadequate, but there appears to be a remarkable degree of agreement among the fragmentary studies which are available. Five separate studies of migrants in agriculture show average periods of employment ranging from 40 to 60 percent of the year. These studies covered berry pickers reached in Arkansas (1933),¹² farm-camp populations in California (1934-35),¹³ migrants in the Yakima Valley of Washington (1935-36),¹⁴ migratory relief cases in California (1933-35),¹⁵ and casual workers who received aid from Federal transient bureaus in 13 selected centers.¹⁶ While these studies were based on too few cases to allow exact conclusions, it is clear that a substantial proportion of all seasonal migrants fail to find enough work to give them any hope of adequate subsistence.

As might be expected, there is less uniformity of annual earnings among the various groups of seasonal migrants studied than in the periods of employment of these workers. Nevertheless a fairly consistent picture emerges when the groups which have been studied are separated into 2 classes: (1) A more fortunate class consisting of California farm-camp populations, western beet-sugar workers, and Yakima Valley workers; and (2) a less fortunate class composed of California relief cases and of those receiving aid from Federal transient bureaus. The average (median) family earnings of the more fortunate migrants ranged around \$400 per year: \$437 for the families studied in California farm camps (1934-35), \$406 for beet-sugar families (1935),¹⁷ and \$357 for Yakima Valley families (1934-36). Most of these families had more than one working member. The average earnings per worker of the California group amounted to only \$221, and the average earnings of those studied in the Yakima Valley amounted to \$297 for heads of families and \$288 for unattached men. The earnings of migrants selected from relief agencies were still lower. The average (median) earnings of 775 relief families in California were \$281, and these earnings amounted to only \$181 per worker. For those who received aid from the Federal transient bureaus, net yearly earnings were computed after deducting the value of services for which charges were made by employers. The median earnings of the 500 workers studied were

¹² Unpublished study of the Arkansas Emergency Relief Administration, *A Survey of Transient Labor in the Berry Fields*, Aug. 14, 1936.

¹³ Data furnished in advance of publication by Edward J. Rowell, Regional Labor Adviser, U. S. Resettlement Administration, San Francisco.

¹⁴ Paul H. Landis and Melvin S. Brooks: *Farm Labor in the Yakima Valley*, Washington State Agricultural Experiment Station Bulletin No. 343, Pullman, Wash., 1936.

¹⁵ California State Relief Administration, *Migratory Labor in California*, San Francisco, 1936.

¹⁶ Works Progress Administration, Division of Social Research, Monograph VII: *The Migratory-Casual Worker*, by John N. Webb, Washington, 1937.

¹⁷ Data furnished by the U. S. Children's Bureau in advance of publication.

\$223 in 1933 and \$203 in 1934. Half of the 200 agricultural workers in this group had net earnings of less than \$110 in 1933 and less than \$124 in 1934.

These studies suggest that adult men among the seasonal migrants in agriculture may average about \$300 per year and that migrant families average perhaps \$400 per year. Assuming an average of two workers and four to five persons per migrant family—approximately the family composition which has been observed in California—it may be estimated that the earnings of migrant agricultural families are equivalent to a wage of only about \$200 per worker, and that they provide maintenance of less than \$100 per year for each member of the average migrant family. Such wages are clearly inadequate for any decent level of existence.

COLLECTIVE BARGAINING BY AMALGAMATED CLOTHING WORKERS

By HELEN S. HOEBER, of the U. S. Bureau of Labor Statistics

THE Amalgamated Clothing Workers of America includes workers engaged in the production of men's and boys' clothing other than work clothing.¹ In the past year custom and alteration tailors have been brought within the union's sphere of influence. The industry is characterized by small establishments, although there has been a recent tendency toward larger manufacturing units.²

In men's clothing nearly 80 percent of the establishments and 66 percent of the workers in 1933 were in 10 leading metropolitan centers. The proportion of establishments and workers located in each of these cities, and the average size of establishment is shown below:

Percentage of Establishments and Workers Located in Specified Cities and Average Size of Establishment

Metropolitan area	Percent of total establishments	Percent of total workers	Average number of workers to establishment
New York City.....	44.9	21.9	26.2
Chicago.....	6.7	9.6	77.3
Philadelphia.....	7.6	7.7	54.4
Baltimore.....	9.3	6.9	39.9
Rochester.....	.7	5.9	466.1
Cincinnati.....	2.2	4.0	96.6
Cleveland.....	.9	3.8	229.1
Boston.....	4.9	3.1	34.4
St. Louis.....	1.4	2.2	84.3
Milwaukee.....	.8	.9	64.6

The difference in size of establishment reflects the specialization in the main markets. The New York market, with its small shops, tends to produce the cheaper clothes, while the larger shops in Chicago and Rochester tend to produce quality goods. Markets dominated by small shops tend also to be centers of contract shops. In 1935 contract shops comprised over 40 percent of all establishments.

¹ The Amalgamated now includes workers engaged in the manufacture of men's clothing, coats, suits, topcoats, overcoats, trousers; men's and boys' shirts, blouses, pajamas, and underwear, including work shirts, neckties, and custom-tailored garments; and sheep-lined and leather clothing. The necktie workers were affiliated with the Amalgamated in April 1935. According to the 1935 Census of Manufactures there were 154,583 wage earners engaged in the manufacture of suits, coats, and jackets; 61,112 wage earn-

ers in work-clothing manufacture; 59,944 in shirt and nightwear manufacture; 11,185 in miscellaneous furnishing goods; and 7,655 in underwear.

² The average number of workers per establishment in coat and suit manufacturing has increased from 39 to 52 between 1923 and 1935. The number of establishments has decreased from 4,024 to 3,001. Shirt factories in 1933, the latest year for which data are available, employed 108 workers, on the average.

The Amalgamated and Hart, Schaffner & Marx

The history of the Amalgamated Clothing Workers of America begins with the strike of 1910 in Chicago.³ This strike was a spontaneous movement of previously unorganized workers which started in the shops of Hart, Schaffner & Marx and spread over the entire city. In January 1911, Hart, Schaffner & Marx settled with its 6,000 workers, but the strike against the rest of the industry was called off shortly thereafter with practically no gains.

The first agreement with Hart, Schaffner & Marx provided for little more than the selection of an arbitration board. Two months after the close of the strike, the arbitration board handed down a decision providing for wage increases, equal division of work in slack times, health safeguards, and the appointment of a company official to hear and decide grievances and complaints.

During the following year the arbitration board was called upon to handle a great many grievances, and considerable discontent arose over the slowness in getting decisions. In order to speed up the adjustment process a trade board was established, composed of persons with an intimate knowledge of the industry. The board was bipartisan, with an impartial chairman jointly selected.

To facilitate settlement of disputes the trade board worked through deputies. One deputy for the union and one for the company made investigations and presented decisions, when agreed, to the trade board. Most cases were settled by the deputies, but when the board made decisions the deciding vote was usually cast by the impartial member. Thus the position of the impartial member grew in importance, and the institution of the impartial chairman, as it is now known in the men's clothing industry, was gradually developed. In practice, disputes were generally handled entirely by the trade board or its deputies, while the board of arbitration considered problems where no precedent had been established.

When the arbitration award expired in 1913, the chief point of difference was the union's demand for a closed union shop. Agreement was reached by the company and the union on a preferential union shop, which permitted the union gradually to achieve a closed-shop status. All other matters were referred to the board of arbitration. The decision of that board renewed the agreement and award for 3

³ The clothing workers at this time were organized as locals of the United Garment Workers, but formed their own union in 1914. Because the United Garment Workers was affiliated with the American Federation of Labor, the Amalgamated Clothing Workers was considered a dual organization. In

1932 the jurisdictional questions were adjusted on the basis of maintaining the status quo, and the Amalgamated joined the A. F. of L. Four years later it was suspended by the executive council of the A. F. of L. for its participation in the Committee for Industrial Organization.

years, except that the wage question might be reopened whenever a general change occurred in the industry, and that the weekly hours were reduced from 54 to 52. Union preference was to apply in hiring and lay-offs.

At the expiration of this agreement in 1916 another 3-year agreement was signed, the significant changes being a reduction of weekly hours to 49 (lowered to 48 the next year) and an elaboration of the adjustment machinery. To facilitate settlement of disputes through conciliation, shop chairmen were elected by the workers. All grievances were to be submitted first to the shop chairman, who was to attempt to settle them with the superintendent or foreman before utilizing the other adjustment machinery. Two shop committees were also established, one to deal with the special problems of the cutters and the other to fix new piece rates. Each was a bipartisan committee, with a third impartial member acting when necessary.

Subsequent agreements have changed only with respect to wages and hours and a provision that the wage level may be considered annually. The contractual relationship between the union and Hart, Schaffner & Marx was unusual for its flexibility. The agreements established principles and broad policies—a legislative function. The shop committees, shop chairmen, deputies, the trade board, the impartial chairman, and the board of arbitration assumed administrative and judicial functions. The accumulated body of rulings supplemented and made workable the enunciation of policy in the agreements, thus establishing a system of extra-legal industrial law.

Extension of Collective Bargaining in Men's Clothing Industry

The further history of the Amalgamated Clothing Workers is that of the union's efforts to establish in all the centers of the men's clothing industry the procedures worked out experimentally in the Hart, Schaffner & Marx shops. A number of strikes in New York City⁴ during the period from 1909 to 1913 resulted in few gains by the union, but in the following year considerable gains were made after lock-outs in New York City and Baltimore. In 1915 the union called a strike in Chicago against the manufacturers other than Hart, Schaffner & Marx. Although the attempt to bring this market center under contractual relations failed, the union's shop chairmen were recognized in individual settlements.

The 1915 agreement with a New York employers' association provided for a closed shop in both inside and contract shops, and for a permanent arbitration board. After a year's effort the members of the board resigned because of their difficulty in securing employer

⁴ These strikes were conducted by locals of the United Garment Workers of America, who participated in 1914 in the formation of the Amalgamated.

cooperation. While there was no contractual relationship with employers, the union was able to secure the 48-hour week in December 1916, and wage increases the following year. A strike for the 44-hour week in 1918-19 was settled by incorporating in an agreement the report of an impartial advisory board, which recommended a 44-hour week, an investigation of real wages, and the appointment of an impartial chairman for the market. The association appointed a labor manager, similar to the head of the labor department in Hart, Schaffner & Marx, and for the first time the procedure developed in the Chicago firm was applied with an employers' association.

In December 1920, during an open-shop movement throughout the country, the New York Association of Clothing Manufacturers instituted a lock-out after the union refused to agree to the abrogation of the joint machinery established the previous year. This was followed by many suits for injunction, applications for damages, and even one for dissolution of the union. In June 1921, after some settlements with individual firms, the association was reorganized and a 1-year agreement was signed which reestablished collective bargaining on the former basis. The industrial depression, aggravated by the long lock-out, resulted in the dissolution of the employers' association and the discontinuance of the market agreement the following year.

After a general strike in the spring of 1924, a new association was formed and contractual relations reestablished with an impartial chairman administering the agreements. The 1926 agreement provided for regulation of contractors through registration. Each jobber registered with the impartial chairman the names of the contractors whom he expected to use. Any changes in contractors had to be approved by the union and the association. The weekly minimum wages established in 1926 were replaced in 1928 by piece rates.

In the meantime the union had become well established in other markets. Its influence was extended into the Baltimore market in 1915 when it concluded an agreement with the largest company. During the next 4 years organizing continued in all markets. In 1919 the manufacturers of Rochester, Chicago, Montreal, and Toronto in quick succession established relations with the union. During the 1920's other markets were brought under the influence of the Amalgamated until 75 percent of the coat and suit manufacturers were operating under closed-shop agreements.

In each market, agreements were signed both with employers' associations and with the few firms who remained independent of the associations. Responsibility in bargaining for each market area was vested in the union's joint board, composed of representatives of each local and a full-time staff of officers. The locals, divided variously according to craft, nationality, or location, assumed the status merely of administrative units.

The joint board at first worked only through the shop committees and shop chairmen. New developments were transmitted to the membership through market-wide councils of these shop representatives. The unwieldy size of the councils, however, and the necessity of settling a large proportion of the complaints through conciliation, rather than recourse to the impartial chairmen, necessitated the establishment of liaison officers between the joint boards and the shops.⁵ These were known as business agents or deputies, paralleling in function the labor or personnel managers appointed by individual firms or groups of employers. Through these various agencies the union policed the market and secured compliance with the agreement and the rulings of the impartial chairmen.

Union-Management Relations

The Amalgamated early turned its attention to problems of administration and improvement in collective-bargaining procedures. In 1920 a research department was established to prepare material for use in negotiations with employers and in hearings before the impartial chairmen. Union employment agencies were established in each market. The Chicago employment office, reorganized in 1922, served as a model for the other markets. Adequate records of job seekers were kept, accurate and competent interviewing was established, and political patronage within the union was eliminated. These employment exchanges eliminated the confusion and disorganization of hiring at the shop. The union assumed for its members the responsibility of job seeking and for employers the responsibility of securing an adequate and efficient working force.

The union took over other management functions when it parried employer requests for lower costs through wage reductions by offering to reduce costs by improved efficiency. Union experts went into the shops, reorganized the flow of work, subdivided processes, established production standards under week work and later piece work, standardized styles, substituted machines for hand labor, etc. This rationalization policy was adopted by the union in an effort to help union employers to meet competition.

As a result of these efforts production costs were considerably reduced. Although piece rates were lowered in many cases, workers were able to raise their output and individual earnings increased. Employment, however, was reduced, particularly among the cutters. One way of meeting this situation was demonstrated in Hart, Schaffner & Marx in 1926. The impartial chairman permitted the dismissal of

⁵ In the Chicago market the impartial chairman hears only those cases which cannot be settled by reference to a trade board. In New York City the dispute may go through an intermediate stage of conference between the union's joint board and the labor department of the New York Clothing Manufacturers' Exchange.

150 cutters, each of whom was paid \$500 as a bonus for waiving his right to a job in the industry. The bonuses were paid two-thirds by the company and one-third by the union.

In addition to improving the competitive position of firms without recourse to wage cutting, the union undertook to lend money through its banks to employers in financial difficulty. An outstanding example of this is the several years of continuous effort by the union to keep in business a large employer in the Baltimore market.

An experiment in union ownership and management was undertaken in 1928. During a lock-out by a Milwaukee firm, the union acquired its own shop and employed the locked-out members. The union operated this shop for several years on a contract basis for Hart, Schaffner & Marx. During the depression, in 1932, this contract was withdrawn and the shop was converted into a producers' cooperative which is still in operation.

Unemployment Insurance

Another important innovation was the introduction of unemployment insurance in the principal markets. In the spring of 1923 the arbitration board for the Chicago area handed down a wage award and formulated the principles to govern an unemployment fund. These were incorporated into a formal agreement in September of that year. The employers and the workers each contributed 1½ percent of the total weekly wages. In April 1928, the employers' rate of contribution was doubled. Small companies pooled their funds, and large companies were on an individual reserve basis.

Regulations for collections and payments were altered from time to time in accordance with the condition of the fund. The original waiting period of 2 weeks was soon reduced to 1 week. Benefits were cut from 40 percent to 30 percent of average earnings. In contract shops benefits were payable to each worker up to the equivalent of 88 hours of earnings. In inside shops the maximum benefits were raised to 110 hours if a season's reserves were on hand. Benefits were not to total more than \$15 a week or \$100 a year. Periods of brief lay-off, as short as half a day, were credited to the unemployment for which a worker could claim benefits, but such short-time credit was not granted in any week during which earnings exceeded \$50. The ratio of benefits payable was 1 week for 10 weeks on the job or on lay-off (involuntary absence). Benefits were not paid when on strike.

Unemployment insurance was established in the Rochester and New York City markets in 1928. In the New York market, an employer's contribution was 1½ percent of the labor cost of clothing manufactured for him in both inside and contract shops. The fund was pooled for the entire market. Because the depression occurred soon after the fund was established, benefits were paid in accordance with

need rather than according to fixed rules. In Rochester, contributions were first set at 1½ percent for both employers and workers. Worker contributions, however, were postponed indefinitely and the employer contribution was later raised to 3½ percent. Payment of benefits began in Chicago in May 1924, in New York in April 1929, and in Rochester in May 1930. In Rochester special disbursements had been made for a year before the systematic payments went into effect.

Status of the Amalgamated Under the N. R. A.

During the period of the depression the union suffered considerable losses, particularly in New York, where control had always been difficult. Wage cuts were put into effect in all markets. In 1932 the union called a number of strikes in protest against such wage decreases, and some wage increases were secured. The general wage controversy was unsettled, however, at the time of the passage of the National Industrial Recovery Act.

The code for the clothing industry became effective on September 11, 1933. It reduced weekly hours from 44 to 36, restricted production to one shift per week, and prohibited home work and child labor. A general minimum wage rate of 40 cents an hour in the North and 37 cents in the South was established. Existing differentials up to the weekly rate of \$30 were to be maintained. The Research and Planning Division of the N. R. A. estimated that the wage and hour provision of the code would increase total pay rolls 28 percent.⁶ This code was one of the few which provided for labor representation on the code authority. Five of the 23 members were appointed on recommendation of the Labor Advisory Board, of which Sidney Hillman, president of the union, was a member.

The early N. R. A. period was marked by a vigorous organization drive in the shirt industry. Shirt cutters, located chiefly in New York, had been taken into the union in 1917, but until 1933 there had been no extensive organization of the rest of the shirt industry. The union is now firmly established in the eastern section of the shirt industry. A further extension was achieved in March 1936, when the Journeymen Tailors of America, an organization covering the field of custom and alteration tailoring in retail stores, joined the Amalgamated.⁷

Recent Developments

On February 14, 1937, a national agreement calling for a 12-percent wage increase was announced. The wage increase, effective May 15, 1937, covers 135,000 workers, or 85 percent of the coat and suit

⁶ Code of Fair Competition for the Men's Clothing Industry, registry No. 216-1-06, p. 14. See Monthly Labor Review for September 1933 (p. 547) for a summary of this code.

⁷ In 1914 and 1915 these unions had voted to amalgamate, but the move was brought to an end on objection from the American Federation of Labor.

industry exclusive of cutters, whose wages are left to subsequent negotiation. This agreement was in the form of a joint press release and represents the first bargaining of national scope in the men's clothing industry.⁸

Provisions of current Amalgamated Clothing Workers' agreements are summarized in the following paragraphs. The analyses cover 28 agreements in suit and coat manufacture, 7 in shirt manufacture, and 36 for custom and alteration tailors. Although exact figures on the number of workers covered by the various agreements are not available, it is known that the coat and suit and tailor agreements cover most of the union shops. The shirt agreements are with employer associations and cover three important centers of the industry—eastern Pennsylvania, up-State New York, and Connecticut. They are therefore representative of the agreements in this branch of the industry.

Men's Clothing Agreements⁹

Agreements in the suit and coat industry usually run for 1-year periods, although a few have 2- or 3-year terms. Agreements are automatically renewed unless notice of intention to change is given within a specified time before the termination date. This period of notice varies from 15 to 90 days, but is most commonly 30 days. In a number of agreements, however, the question of the wage level may be reopened on 10 or 15 days' notice whenever a general change occurs in industrial conditions. In several agreements employers who violate the agreement are made liable for any damages suffered by union workers. Stoppages called to secure compliance with the agreement are not considered violations of the agreement.

Both piece and time rates are found in these agreements, but when the piece-rate system is followed weekly minima are usually established. Wages must be paid weekly. Jobbers are usually required to guarantee, on penalty of a stoppage, the prompt payment of wages by their contractors, but some agreements specify the amount of notice which must be given before such a stoppage can be called. The piece-rate structure has been simplified by classifying the grades of garments and standardizing operations. When style changes necessitate the setting of new rates, time studies may be conducted in order to secure an adequate basis. As orders vary, the appropriate piece rate must be agreed upon and applied in the shop. The business

⁸ In 1919 a National Board of Labor Managers was organized in order to bring together the "judges" in the various union markets. A few weeks later employer representatives from Rochester, New York City, Chicago, and Baltimore formed the National Industrial Federation of Clothing Manufacturers. This group met with the union in September 1919, with authority to make an agreement for the four markets, but failed to do more than re-

turn the matter for independent settlement in each market. Representatives of Boston, Montreal, and Toronto manufacturers were later added to the Federation. In 1920 the Federation's authority was limited to an advisory capacity and it became inoperative the following year.

⁹ Shirt and custom and alteration tailoring agreements are described in separate sections.

agents are responsible for seeing that the labor costs in each shop conform to the market standard.

The N. R. A. code standards of 36 hours' and 5 days' work per week are still general in the industry.¹⁰ In a few agreements 4 extra hours per week may be worked during the busy season without the payment of the overtime rate. When overtime work is not prohibited entirely, time and a half is usually paid for such work. Starting and finishing time, from 8 a. m. to 5 p. m., is specified in only a few agreements. The usual holidays are New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving, and Christmas. In two agreements four additional holidays are granted. Three agreements provide that full pay must be given for holidays.

Union membership is a condition of employment in all but three agreements, in which a preferential union shop is established. New employees must be hired through the union unless the union is unable to furnish qualified workers within a reasonable time, usually 24 to 72 hours. Such workers hired on the open market must join the union at the end of their probation period.

All workers must serve a probation period, usually 2 weeks, after which time they are considered permanent employees. Discharge is in all cases subject to appeal. A few agreements require advance consent of the union before a discharge can take effect. Permissible reasons for discharge are not specified, except that there must be no discrimination for union activity. One agreement permits discharges only at the end of a week.

During slack seasons work must be equally divided, insofar as possible, among regular employees. Two agreements establish preference during slack seasons for inside workers, when an employer maintains both an inside shop and contract shops. The union is given the right in 2 neckwear agreements in New York City to substitute for brief periods an unemployed cutter for one of the regular cutters in a firm's employ.

The initial and major responsibility for securing compliance with the agreements is that of the shop chairmen or committees and the labor manager or other representative of the employer. Disputes not adjusted in this way may be referred to representatives of the local union or joint board for negotiation with the company. In case of failure, reference is then made to a joint committee or, more commonly, to an impartial chairman. General wage questions and other matters not involving interpretation of the agreement are frequently referred directly from the disputants to a separate board of arbitration. In smaller markets an impartial chairman may be designated only when his vote is necessary to break a tie on the joint committee.

¹⁰ Three agreements, however, provide for a 40-hour week. One of these agreements covers neckwear manufacture and one infants' and children's wear. The code for infants' and children's wear provided for a 40-hour week, as did also the code for leather garments and cotton pants.

The neckwear makers of New York City have a novel arrangement in which a "committee of immediate action" is established for the hearing of individual disputes. The committee is composed of 2 representatives of the employers and 2 each of the neckwear makers and cutters. Union representatives vote only on cases which concern their craft, each representative having half a vote if the interests of both cutters and makers are involved. Cases must be heard within 48 hours and decided within 7 days. General disputes or appeals from the committee of immediate action are referred to a conference committee composed of 5 representatives of the employers and 5 from each workers' group, together with an impartial chairman.

Union representatives are usually granted access to the shop, though occasionally an employer representative must accompany them. In one agreement weekly visits are required. Less frequently the union representatives are granted access to the employers' books and records.

Other provisions of these agreements abolish child labor and home work. All the contractors of a manufacturer under agreement with the union must be union firms. In some agreements all contractors must be registered with the union and changes made only with the approval of the union. One agreement prohibits contracting entirely. Several agreements prohibit employers from moving away from the locality during the life of the agreement, and one requires 90 days' notice before a firm can be moved.

Agreements in the Shirt Industry

All but one of the shirt agreements are for 1-year terms, renewable unless notice is given of intent to change. The period of notice is either 30 or 90 days. The exception is a 3-year agreement, renewable except on 60 days' notice. A new wage level may be negotiated whenever there is a general change in industrial conditions.

Piece rates are to be established by joint piece committees. Maximum weekly hours are 40, to be worked in 5 days. Overtime is prohibited in one agreement. In 3 agreements which permit overtime, the rate is time and a half. One agreement requires that 2 weeks' notice be given employees if there is to be a general shut-down for vacation.

Discharge is included among the matters which are subject to arbitration. During slack seasons available work is to be divided equally among regular workers.

Union membership is a condition of employment in most of the agreements, and the check-off method of collecting dues is established in a majority. New employees must be secured through the union, which is given a reasonable time in which to furnish workers. In one agreement employees hired on the open market are to join the union

in 4 weeks; in another, learners are given 12 weeks in which to become union members.

All of the agreements provide for reference of disputes to arbitration by a joint committee with an impartial chairman or by a single impartial arbitrator. Four agreements require that 5 days' notice must be given the other party before a matter can be referred to arbitration. Access to the shop at all times is granted to union representatives.

Among the other provisions of shirt workers' agreements are those in two agreements which establish preference for union contractors, while 2 others permit the use of union contractors only. One agreement requires the consent of the union before cutting can be given out to a contractor.

Custom and Alteration Tailoring

Agreements for this branch of the industry are usually for 1-year terms, although five have 2-year terms and one is for a period of 15 months. If no notice is given, agreements are automatically renewed for another year. Periods of notice required for changes at the termination of the agreements vary from 15 to 60 days, 30 days being the most common period. In 6 agreements a new wage level can be negotiated at the beginning of each season if there has been a significant change in the Bureau of Labor Statistics' wholesale-price index. In one the wage question may be reopened whenever there is a 10 percent change in the Bureau's cost-of-living index. Employers are liable for damages due to violations of agreements. Stoppages called to secure compliance with the agreement are not considered violations.

Although neither piece nor time work predominates in the industry, several agreements specify that both systems cannot be in effect in the same shop. Temporary workers employed for less than 3 days a week are to receive time and a half for the hours worked. At least 4 hours' pay must be given to an employee who starts the day's work and then is laid off, and the same amount must be paid to workers laid off without notice. Sex differentials are prohibited in three agreements.

More than half the agreements provide for a 40-hour week. Four agreements establish a 36-hour week, while 2 have this maximum for all but alteration tailors, who work 40 hours. Maximum hours of 40 or less obtain in the major markets. Two agreements provide a 42-hour week and one a 42½-hour week. Forty-four hours are the weekly maximum in three agreements and 48 in three agreements, the latter in southern cities. In some agreements only alteration tailors are permitted to work on Saturdays. During peak periods of the year, generally defined as 13 weeks in the spring and 13 weeks in the fall, weekly hours are frequently extended to 40, 44, or 48 hours.

for the duration of the emergency. Starting and finishing times vary within the limits of 8 a. m. and 6 p. m. on weekdays. Since this work is done in retail stores, finishing time is often extended to 9 p. m. on Saturdays.

Overtime work is usually paid for at time and a half, although several agreements establish a time and a third rate. Only straight time is paid for work done the night before a holiday. Work done on holidays is restricted to necessary work and must be paid for at twice the straight-time rate. With few exceptions the usual six holidays are provided. Several agreements specify that full pay must be given during the week in which a holiday occurs. One week's paid vacation is granted annually after a year's service with the firm under 5 agreements.

With a few exceptions the agreements require that all employees shall be union members. In such cases the union is designated as the source of supply for new workers. If the union is unable to furnish the required help within a reasonable time, employees may be hired on the open market but they must join the union within a period varying from 10 days to a month. Access to the shop during working hours is granted to union representatives, but in a few cases they must be accompanied by a representative of the employer.

Discharges are in all cases subject to review by the various adjustment agencies, four agreements providing that a discharge may be made only after written notice to and approval from the union. During dull periods work is to be equally divided among the regular force, the regular force being employees who have served a 2- or 3-week probation period. In two agreements a minimum service of 1 year is required for participation in this share-the-work plan. Some agreements specifically prohibit any discharge or lay-off during the dull periods. One week's notice is usually required in cases of quits or lay-offs.

All disputes are to be settled within 48 hours, if possible, by the shop committee or shop chairman. All stoppages of work are prohibited until after recourse to arbitration. There is no uniformity among these agreements with regard to the composition of the arbitration agency. A single arbitrator, a board of 3 impartial arbitrators, and bipartisan boards with neutral chairmen are all provided.

Home work is prohibited in several agreements. In two no new home work is permitted pending a report from a joint committee established to effect a means of abolishing the practice.

Several agreements require the registration of contractors with the union and the union's sanction for any change in the list. Manufacturers signing agreements with the union must employ only union contractors.

ANNUAL EARNINGS IN THE BITUMINOUS-COAL INDUSTRY¹

THE average annual earnings of bituminous mine workers in 1935 amounted to \$917. This average applies to all wage earners in all occupations whose names appeared on the pay rolls of the companies covered by the Bureau's survey. Thus, it is possible that the same name may have appeared on the pay rolls of more than one firm, but it is believed that such duplication was not of sufficient extent to have any material influence on the average quoted. Also, it is possible that some of the workers may have secured additional earnings from other jobs or from work in mines not covered by the survey, but this, also, is believed to have been of rather rare occurrence.

The most fortunate employees were those whose names appeared in each of the 24 half-monthly pay-roll periods during the year. These constituted 50.2 percent of all the wage earners scheduled and their annual earnings averaged \$1,146. Those employees who had work during 9 months of the year (i. e., during 18 pay-roll periods) constituted 79.4 percent of the total, and their annual earnings averaged \$1,045.

Figures Are Part of Comprehensive Survey of Wages and Hours

The above figures are preliminary, being based on reports covering 21,200 workers in 103 mines located in 19 States. The annual data were obtained by the Bureau as part of a comprehensive survey of wages, hours, and working conditions, which included approximately 100,000 employees in more than 500 bituminous-coal mines. In addition to the 1935 annual earnings, the information collected will show average hourly earnings, weekly hours, and weekly earnings for a recent period by occupation, color, State and region, and type of mine. Detailed figures covering various phases of the survey will appear later in this publication.

The annual earnings shown here are gross, as they include certain occupational expenses which in most instances must be borne by inside workers in underground mines. These expenses cover such items as explosives, tool sharpening, rental of safety lamps, cost of carbide for open lights, purchase of tools, etc. Moreover, the annual earnings reported are limited to those made by a worker in 1935 within a single establishment, thus excluding the earnings he may have obtained from other companies during the year. The figures plainly indicate, however, that in 1935 the great majority of the employees

¹ Prepared by Edward K. Frazier, of the Bureau's Division of Wages, Hours, and Working Conditions.

worked for one company only, as nearly 80 percent obtained some work during 18 or more half-month pay-roll periods during the year. Lastly, annual data were secured for only those wage earners who were actually working during the period covered by the wages and hours data. This latter procedure lends somewhat greater weight in the figures to the more fixed part of the labor force than would appear if the data had been secured for each wage earner who worked any part of 1935.

The number of pay-roll periods over which an employee's work was spread, it should be pointed out, by no means expresses the actual number of days or hours worked during the year. The amount of time worked during a half-month pay-roll period varies seasonally, and there are sometimes differences between the working time of mines even during the same season. Thus, an employee may work an average of 4 days of 7 hours each per week during the fall and winter months and only 3 days of from 4 to 7 hours each during the spring and summer months. The number of man-hours available for each employee may be even less in some of the marginal mines, where employees may secure only 3 to 6 days' work during each half-month pay-roll period. Hence, the number of pay-roll periods over which work was spread can be used only as a measure to classify the employees according to the extent to which they may be considered regular employees of the firm.²

In presenting the data on annual earnings for 1935, the normalcy of the year should also be considered. On the basis of tonnage, the amount produced in 1935 was less than for any year between 1909 and 1931 and only 11.6 percent greater than in 1933. Likewise, the average number of days operated in 1935 was lower than for any year between 1925 and 1930, and only 12 days higher than in 1933, when the figure was 167. In view of these facts, 1935 conditions in this industry must be classed as below normal.

Data for Industry as a Whole

An examination of the distribution in table 1 shows that, among those employees whose work extended over 24 half-month periods, 3.0 percent received less than \$600, 15.7 percent less than \$800, and 38.5 percent less than \$1,000. Of those earning \$1,000 and over, 40.6 percent were paid \$1,000 and under \$1,400 and 13.4 percent \$1,400 and under \$1,800, while only 7.5 percent had yearly earnings of \$1,800 and over.

² Of the 21,200 male wage earners for whom annual earnings were secured, 10,640, or 50.2 percent, had work periods which extended throughout the entire year, and 79.4 percent had work which was spread over 18 or more half-month periods (9 months and

over). Furthermore, 89.0 percent secured some work during 12 or more half-month pay-roll periods (6 months and over). This leaves only 11.0 percent whose work was spread over periods of less than 6 months.

Of those whose work was spread over 18 or more half-month pay-roll periods, 8.2 percent were reported as earning under \$600, 25.9 percent under \$800, and 51.4 percent under \$1,000. The greater part of the 48.6 percent with annual earnings of \$1,000 and over received \$1,000 and under \$1,400. Those paid \$1,400 and under \$1,800 formed 10.0 percent of the total, while only 5.1 percent obtained \$1,800 and above.

Among those who secured some work during 12 or more half-month periods, 12.5 percent earned less than \$600, 31.7 percent less than \$800, and 56.0 percent less than \$1,000. For the earnings groups from \$1,000 up, the distribution resembles quite closely that of the employees whose work was spread over 18 or more half-month periods.

When consideration is given to all employees who worked any part of 1935 (as covered in this survey), it may be seen that 21.6 percent received less than \$600, 39.1 percent less than \$800, and 60.9 percent less than \$1,000. Only 39.1 percent were paid \$1,000 and over. The employees in this group tended to concentrate in the class of \$1,000 and under \$1,400 (27.0 percent of all workers). Of the remainder 8.0 percent received \$1,400 and under \$1,800 and only 4.1 percent as much as \$1,800 and over.

TABLE 1.—*Percentage Distribution of Wage Earners in the Bituminous-Coal Industry According to Annual Earnings, by Pay-Roll Periods, 1935*¹

Amount of annual earnings	Employees whose work was spread over—							
	24 half-month pay-roll periods (1 year)		18 or more half-month pay-roll periods (9 months and over)		12 or more half-month pay-roll periods (6 months and over)		All half-month pay-roll periods (1 to 24, inclusive)	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Under \$200			(2)	(2)	0.1	0.1	4.7	4.7
\$200 and under \$400	0.1	0.1	1.0	1.0	2.6	2.7	6.5	11.2
\$400 and under \$600	2.9	3.0	7.2	8.2	9.8	12.5	10.4	21.6
\$600 and under \$800	12.7	15.7	17.7	25.9	19.2	31.7	17.5	39.1
\$800 and under \$1,000	22.8	38.5	25.5	51.4	24.3	56.0	21.8	60.9
\$1,000 and under \$1,200	25.0	63.5	21.2	72.6	19.2	75.2	17.1	78.0
\$1,200 and under \$1,400	15.6	79.1	12.3	84.9	11.1	86.3	9.9	87.9
\$1,400 and under \$1,600	8.1	87.2	6.2	91.1	5.6	91.9	5.0	92.9
\$1,600 and under \$1,800	5.3	92.5	3.8	94.9	3.4	95.3	3.0	95.9
\$1,800 and under \$2,000	3.6	96.1	2.5	97.4	2.3	97.6	2.0	97.9
\$2,000 and under \$2,200	2.0	98.1	1.4	98.8	1.3	98.9	1.1	99.0
\$2,200 and under \$2,400	.9	99.0	.6	99.4	.5	99.4	.5	99.5
\$2,400 and over	1.0	100.0	.6	100.0	.6	100.0	.5	100.0
Total employees in this group	10,640	50.2	16,824	79.4	18,862	89.0	21,200	100.0
Percentage								

¹ Based on information from 98 underground and 5 open-pit mines.

² Less than $\frac{1}{10}$ of 1 percent.

*Annual Earnings of Inside Workers
in Underground Mines*

The 98 underground mines included in this tabulation supplied annual data for 20,723 employees, of whom 17,916,³ or 86.5 percent, were inside workers. The average yearly earnings of the inside employees whose work was spread over 24 half-month pay-roll periods amounted to \$1,133 in 1935. This amount exceeds by \$102 the average of \$1,031 for those whose work extended over 18 or more half-month pay-roll periods. The average for those whose work was spread over 12 or more half-month periods amounted to \$985, as compared with \$904 for all employees who worked any part of 1935 (as covered in this survey).

The distribution of employees in table 2 shows that 3.1 percent of those who secured some work in each of the 24 half-month periods received less than \$600, 15.4 percent less than \$800, and 38.5 percent less than \$1,000. Of the 61.5 percent paid \$1,000 and over, 41.8 percent of all employees earned \$1,000 and under \$1,400, 13.2 percent \$1,400 and under \$1,800, and only 6.5 percent \$1,800 and over.

Taking those employees whose work was spread over 18 or more half-month pay-roll periods, it is seen that 8.4 percent were paid less than \$600, 25.8 percent less than \$800, and 51.8 percent less than \$1,000. Less than one-half, or 48.2 percent of the workers in this group, earned as much as \$1,000 or more, of whom 34.1 percent had earnings of \$1,000 and under \$1,400, 9.7 percent \$1,400 and under \$1,800, and only 4.4 percent \$1,800 and over.

As regards those who secured some work in 12 or more half-month pay-roll periods, 12.9 percent were paid under \$600, 32.0 percent under \$800, and 56.8 percent under \$1,000. The remaining 43.2 percent had yearly earnings of \$1,000 and over. Most of the employees in this group, however, were paid less than \$1,400, as those earning more than that amount formed only 12.6 percent of the total.

Turning to all employees who worked any part of 1935 (as covered in this survey), 22.2 percent were reported as receiving less than \$600, 39.6 percent less than \$800, and 61.7 percent less than \$1,000. Of the remaining employees 27.2 percent of the total were paid \$1,000 and under \$1,400, 7.7 percent \$1,400 and under \$1,800, and 3.4 percent \$1,800 and over.

³ Of this number, 48.3 percent secured some work in every half-month pay-roll period in 1935 and 78.8 percent some work in 18 or more half-month periods. | Thus, over three-fourths of all the inside workers may be classed as regular employees.

TABLE 2.—*Percentage Distribution of Inside Wage Earners in Underground Bituminous-Coal Mines According to Annual Earnings, by Pay-Roll Periods, 1935¹*

Amount of annual earnings	Employees whose work was spread over—							
	24 half-month pay-roll periods (1 year)		18 or more half-month pay-roll periods (9 months and over)		12 or more half-month pay-roll periods (6 months and over)		All half-month pay-roll periods (1 to 24, inclusive)	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Under \$200			(2)	(2)	0.2	0.2	4.8	4.8
\$200 and under \$400	0.1	0.1	1.0	1.0	2.6	2.8	6.6	11.4
\$400 and under \$600	3.0	3.1	7.4	8.4	10.1	12.9	10.8	22.2
\$600 and under \$800	12.3	15.4	17.4	25.8	19.1	32.0	17.4	39.6
\$800 and under \$1,000	23.1	38.5	26.0	51.8	24.8	56.8	22.1	61.7
\$1,000 and under \$1,200	26.5	65.0	22.1	73.9	19.9	76.7	17.7	79.4
\$1,200 and under \$1,400	15.3	80.3	12.0	85.9	10.7	87.4	9.5	88.9
\$1,400 and under \$1,600	7.9	88.2	6.0	91.9	5.4	92.8	4.8	93.7
\$1,600 and under \$1,800	5.3	93.5	3.7	95.6	3.3	96.1	2.9	96.6
\$1,800 and under \$2,000	3.3	96.8	2.3	97.9	2.0	98.1	1.8	98.4
\$2,000 and under \$2,200	1.8	98.6	1.2	99.1	1.1	99.2	.9	99.3
\$2,200 and under \$2,400	.7	99.3	.5	99.6	.4	99.6	.4	99.7
\$2,400 and over	.7	100.0	.4	100.0	.4	100.0	.3	100.0
Total employees in this group	8,659	-----	14,109	-----	15,911	-----	17,916	-----
Percentage	48.3	-----	78.8	-----	88.8	-----	100.0	-----

¹ Based on information from 98 underground mines.² Less than $\frac{1}{10}$ of 1 percent.

Annual Earnings of Outside Workers in Underground Mines

Annual data were secured for 2,807 outside workers in underground mines. This number constitutes 13.5 percent of the total employees for whom annual earnings in this type of mine were obtained. An examination of the number of pay-roll periods over which their work was spread shows that regularity of employment was greater among outside workers than those employed underground.⁴

The average annual earnings of those whose work was spread over 24 half-month periods amounted to \$1,179. This is \$90 more than the average of \$1,089 for employees whose work extended over 18 or more half-month periods. The latter figure in turn is \$39 higher than that of \$1,050 for those who secured some work in 12 or more half-month periods. The average for all employees who worked any part of 1935 (as covered in the 1935 survey) was \$962. Each of the above averages is higher than the corresponding figures for inside workers.

⁴ Among the outside wage earners, 61.0 percent had work periods which extended throughout the entire year, and 82.4 percent had some work in 18 or more half-month pay-roll periods. In each instance,

however, practically the same percentage secured some work in 12 or more half-month pay-roll periods, the figures being 89.1 percent for outside employees, as compared with 88.8 percent for inside workers.

The distribution in table 3 shows that 3.4 percent of those whose work was spread over 24 half-month periods received less than \$600, 19.1 percent less than \$800, and 41.4 percent less than \$1,000. Of the remaining 58.6 percent who were paid \$1,000 and over, 34.2 percent of all workers earned \$1,000 and under \$1,400, 13.5 percent \$1,400 and under \$1,800, and 10.9 percent \$1,800 and over.

An examination of those whose work was spread over 18 or more half-month pay-roll periods discloses that 6.7 percent earned less than \$600, 27.5 percent less than \$800, and 51.1 percent less than \$1,000. Less than one-half, or 48.9 percent, of the employees in this group received \$1,000 and over—29.7 percent were paid \$1,000 and under \$1,400, 10.9 percent \$1,400 and under \$1,800, and only 8.3 percent \$1,800 and over.

Of those whose work periods extended over 12 or more half-month periods 10.6 percent received under \$600, 31.7 percent under \$800, and 54.3 percent under \$1,000. Of the 45.7 percent paid \$1,000 and over, those receiving \$1,000 and under \$1,400 formed 28.0 percent of all employees, as compared with 10.1 percent earning \$1,400 and under \$1,800, and 7.6 percent \$1,800 and over.

TABLE 3.—Percentage Distribution of Outside Wage Earners in Underground Bituminous-Coal Mines According to Annual Earnings, by Pay-Roll Periods, 1935¹

Amount of annual earnings	Employees whose work was spread over—							
	24 half-month pay-roll periods (1 year)		18 or more half-month pay-roll periods (9 months and over)		12 or more half-month pay-roll periods (6 months and over)		All half-month pay-roll periods (1 to 24, inclusive)	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Under \$200					0.2	0.2	4.7	4.7
\$200 and under \$400	0.2	0.2	0.5	0.5	2.4	2.6	6.6	11.3
\$400 and under \$600	3.2	3.4	6.2	6.7	8.0	10.6	8.7	20.0
\$600 and under \$800	15.7	19.1	20.8	27.5	21.1	31.7	19.0	39.0
\$800 and under \$1,000	22.3	41.4	23.6	51.1	22.6	54.3	20.3	59.3
\$1,000 and under \$1,200	17.1	58.5	15.8	66.9	15.0	69.3	13.4	72.7
\$1,200 and under \$1,400	17.1	75.6	13.9	80.8	13.0	82.3	11.6	84.3
\$1,400 and under \$1,600	8.7	84.3	7.1	87.9	6.6	88.9	5.9	90.2
\$1,600 and under \$1,800	4.8	89.1	3.8	91.7	3.5	92.4	3.1	93.3
\$1,800 and under \$2,000	4.9	94.0	3.8	95.5	3.5	95.9	3.1	96.4
\$2,000 and under \$2,200	2.9	96.9	2.2	97.7	2.0	97.9	1.8	98.2
\$2,200 and under \$2,400	1.2	98.1	.9	98.6	.8	98.7	.7	98.9
\$2,400 and over	1.9	100.0	1.4	100.0	1.3	100.0	1.1	100.0
Total employees in this group	1,711		2,312		2,502		2,807	
Percentage	61.0		82.4		89.1		100.0	

¹ Based on information from 98 underground mines.

The data covering all outside workers show that 20.0 percent earned less than \$600, 39.0 percent less than \$800, and 59.3 percent less than \$1,000. Only 40.7 percent received \$1,000 and over, and very few

of these were paid as much as \$1,800, since 25.0 percent of all employees received \$1,000 and under \$1,400, 9.0 percent \$1,400 and under \$1,800, and 6.7 percent earned \$1,800 or more.

Annual Earnings in the Three Leading Coal States

The three leading coal-producing States in 1935, according to the Bureau of Mines, were West Virginia, Pennsylvania, and Illinois. These States produced 63.1 percent of the total tonnage reported by all mines in the United States. The same States also had 59.9 percent of the total number of employees in 1935. Annual data shown for these States cover 59.6 percent of the workers in the 98 underground mines used here.

In West Virginia the employees whose work was spread over 24 half-month pay-roll periods earned an average of \$1,136 in 1935. The figures in Pennsylvania and Illinois were, respectively, \$1,123 and \$1,089. The same State line-up appeared among workers whose employment extended over 18 or more half-month pay-roll periods, the averages being \$1,075 in West Virginia, \$1,073 in Pennsylvania, and \$1,006 in Illinois.⁵ Taking those employees who secured some work during 12 or more half-month pay-roll periods, the average was highest (\$1,046) in Pennsylvania and again the lowest (\$978) in Illinois. The corresponding figure in West Virginia was \$1,025. When all employees who worked any part of 1935 (as covered in this survey) are included, the averages drop to \$982 in Pennsylvania, \$943 in Illinois, and \$933 in West Virginia.

The distribution in table 4 shows that approximately 45 percent of the employees in Pennsylvania and Illinois, whose periods of work were spread over the entire year, earned less than \$1,000. In West Virginia the percentage was slightly over 37. In each instance less than 8 percent received as much as \$1,800 and over.

When the workers whose employment was spread over 18 or more half-month pay-roll periods are considered, the number paid less than \$1,000 amounted to 50.6 percent in Pennsylvania, 47.0 percent in West Virginia, and 57.6 percent in Illinois. In Pennsylvania, 33.2 percent of all employees in this group were reported as earning \$1,000 and under \$1,400, 10.0 percent \$1,400 and under \$1,800, and 6.2 percent \$1,800 and over. Corresponding percentages in West Virginia were respectively 38.2, 9.8, and 5.0. In Illinois, 32.6 percent were paid \$1,000 and under \$1,400, 6.2 percent \$1,400 and under \$1,800, and 3.6 percent \$1,800 and over.

⁵ In Pennsylvania and Illinois, the employees whose work was spread over 18 or more half-month pay-roll periods amounted to approximately 90 percent of all workers. In West Virginia the percentage was close to 80. In the latter State, however, 55.0 percent had work periods which extended throughout the entire year, as compared to 38.8 percent in Illinois. The percentage in Pennsylvania (68.3) was even higher than in West Virginia.

TABLE 4.—Percentage Distribution of Wage Earners in Underground Bituminous-Coal Mines in Three States According to Annual Earnings, by Pay-Roll Periods, 1935

Amount of annual earnings	Employees whose work was spread over—							
	24 half-month pay-roll periods (1 year)		18 or more half-month pay-roll periods (9 months and over)		12 or more half-month pay-roll periods (6 months and over)		All half-month pay-roll periods (1 to 24, inclusive)	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
<i>Pennsylvania</i>								
Under \$200	(1)	(1)	0.6	0.6	(1)	(1)	3.8	3.8
\$200 and under \$400	3.5	3.5	5.2	5.8	1.7	1.7	4.5	8.3
\$400 and under \$600	12.0	15.5	15.2	21.0	15.8	24.5	7.3	15.6
\$600 and under \$800	29.0	44.5	29.6	50.6	28.5	53.0	14.8	30.4
\$800 and under \$1,000	24.0	68.5	22.1	72.7	21.0	74.0	19.4	56.7
\$1,000 and under \$1,200	12.3	80.8	11.1	83.8	10.6	84.6	9.7	76.1
\$1,200 and under \$1,400	5.9	86.7	5.6	89.4	5.3	89.9	4.9	90.7
\$1,400 and under \$1,600	5.5	92.2	4.4	93.8	4.2	94.1	3.8	94.5
\$1,600 and under \$1,800	4.3	96.5	3.4	97.2	3.3	97.4	3.0	97.5
\$1,800 and under \$2,000	2.1	98.6	1.7	98.9	1.6	99.0	1.5	99.0
\$2,000 and under \$2,200	.8	99.4	.6	99.5	.6	99.6	.6	99.6
\$2,200 and under \$2,400	.6	100.0	.5	100.0	.4	100.0	.4	100.0
Total employees in this group	3,165	-----	4,035	-----	4,272	-----	4,633	-----
Percentage	68.3	-----	87.1	-----	91.6	-----	100.0	-----
<i>West Virginia</i>								
Under \$200	(1)	(1)	.1	.1	.7	.7	4.8	4.8
\$200 and under \$400	2.9	2.9	4.3	4.4	7.8	8.5	8.4	19.2
\$400 and under \$600	12.7	15.6	16.4	20.8	18.9	27.4	16.9	36.1
\$600 and under \$800	21.8	37.4	26.2	47.0	25.7	53.1	22.5	58.6
\$800 and under \$1,000	30.2	67.6	26.5	73.5	23.6	76.7	20.8	79.4
\$1,000 and under \$1,200	14.0	81.6	11.7	85.2	10.3	87.0	9.1	88.5
\$1,200 and under \$1,400	7.9	89.5	6.3	91.5	5.7	92.7	5.0	93.5
\$1,400 and under \$1,600	4.3	93.8	3.5	95.0	3.0	95.7	2.7	96.2
\$1,600 and under \$1,800	2.5	96.3	2.2	97.2	1.9	97.6	1.7	97.9
\$1,800 and under \$2,000	2.0	98.3	1.5	98.7	1.3	98.9	1.1	99.0
\$2,000 and under \$2,200	.6	98.9	.5	99.2	.4	99.3	.4	99.4
\$2,200 and under \$2,400	1.1	100.0	.8	100.0	.7	100.0	.6	100.0
Total employees in this group	2,275	-----	3,199	-----	3,646	-----	4,133	-----
Percentage	55.0	-----	77.4	-----	88.2	-----	100.0	-----
<i>Illinois</i>								
Under \$200			(1)	(1)	.4	.4	1.8	1.8
\$200 and under \$400	0.6	0.6	1.8	1.8	3.2	3.6	2.3	4.1
\$400 and under \$600	16.7	17.3	22.7	24.5	26.0	29.6	24.7	33.2
\$600 and under \$800	28.2	45.5	33.1	57.6	31.5	61.1	29.8	63.0
\$800 and under \$1,000	30.0	75.5	24.2	81.8	22.4	83.5	21.2	84.2
\$1,000 and under \$1,200	10.8	86.3	8.4	90.2	7.7	91.2	7.3	91.5
\$1,200 and under \$1,400	3.7	90.0	3.9	94.1	3.5	94.7	3.4	94.9
\$1,400 and under \$1,600	3.4	93.4	2.3	96.4	2.1	96.8	2.0	96.9
\$1,600 and under \$1,800	2.9	96.3	1.7	98.1	1.6	98.4	1.5	98.4
\$1,800 and under \$2,000	.9	97.2	.6	98.7	.5	98.9	.5	98.9
\$2,000 and under \$2,200	1.3	98.5	.6	99.3	.5	99.4	.5	99.4
\$2,200 and under \$2,400	1.5	100.0	.7	100.0	.6	100.0	.6	100.0
Total employees in this group	1,389	-----	3,089	-----	3,394	-----	3,578	-----
Percentage	38.8	-----	86.3	-----	94.9	-----	100.0	-----

¹ Less than $\frac{1}{2}$ of 1 percent.

An examination of the earnings of those whose work extended over 12 or more half-month pay-roll periods reveals percentages very similar to those relating to employees whose work periods were spread over 9 months or longer. This is due to the fact that only 5.1 percent of the

workers in Pennsylvania, 8.5 percent in Illinois, and 10.8 percent in West Virginia had work periods which were distributed over 6 and under 9 months.

In Pennsylvania, as regards all employees who worked any part of 1935 (as covered in this survey), 8.3 percent earned under \$400, 30.4 percent under \$800, and 56.7 percent under \$1,000. Hence, 43.3 percent were paid \$1,000 and over, with 29.1 percent of all workers earning \$1,000 and under \$1,400, 8.7 percent \$1,400 and under \$1,800, and only 5.5 percent \$1,800 and over. In West Virginia the corresponding percentages were similar. In Illinois, however, only 4.1 percent earned under \$400, but 63.0 percent received under \$1,000. For those receiving \$1,000 or over the distribution in this State resembles that for either West Virginia or Pennsylvania.

WAGE STRUCTURE IN DEEP-SEA SHIPPING¹

THE wage structure in deep-sea shipping is intricate. Not only do the earnings vary greatly among the numerous occupations, due to the wide divergence in skill and responsibility, but they also differ considerably according to type of service, region, size of ship, type of ship's power, trade route, unionization, race and color, etc. The many existing differentials are only roughly recognizable in trade reports and union agreements, the former dealing mostly with general information concerning wages paid by various companies and the latter primarily with minimum and overtime rates. The object of the present survey was to determine the actual levels of monthly rates based on company pay rolls, weighted by the number of employees receiving the various rates, and separated in order to bring out the many existing differentials.

This article is limited to American flag vessels engaged in deep-sea shipping.² It is based on pay-roll information covering voyages of varying length, which were made largely during the second half of 1935. Altogether the survey included 354 ships, operated by 58 companies, the crew members thereof numbering 23,017.³

In making this survey, the Bureau endeavored to secure a true cross section of the industry. The ships covered engaged in the passenger, freight, and tank services (see table 1). Their home ports embraced the 14 principal continental ports in the country, which were Boston, New York, Philadelphia, Baltimore, Norfolk, Savannah, Mobile, New Orleans, Houston, Galveston, Los Angeles, San Francisco, Portland, and Seattle. Among other factors considered to yield a representative sample were trade route, corporate affiliation, type of carrier (common or industrial), size of ship, type of power, and unionization.

TABLE 1.—Number of Employees Covered in Survey, by Type of Service and Region, 1935

Type of service	United States	North Atlantic	South Atlantic and Gulf	Pacific
All services.....	23,017	14,082	1,970	6,965
Passenger ships.....	12,675	8,801	271	3,603
Freight ships.....	8,727	4,126	1,371	3,230
Tankers.....	1,615	1,155	328	132

¹ Prepared by Henry A. Bates and Donald L. Helm of the Bureau's Division of Wages, Hours, and Working Conditions.

² See also articles on The Maritime Strikes of 1936-37, in Monthly Labor Review for April 1937 (pp. 813-827), and Wages, Hours, and Working Conditions on River Towboats, in Monthly Labor Review for May 1937 (pp. 1083-1088).

³ It is difficult to determine the exact total of

workers in the industry. According to the U. S. Bureau of Navigation and Steamboat Inspection, the legal minimum number of crew members (including masters) required aboard American ships of 1,000 gross tons and over, which were active in the designated services as of 1934, was 70,348. It is estimated that the legal minimum is exceeded in actual practice by about 8 percent, which would result in a total employment of approximately 76,000.

The monthly rate is the customary unit of pay in the shipping industry.⁴ Ship's articles and union agreements are drawn up on this basis, while premiums paid for overtime, penalty cargoes, etc., are considered to be additional to the basic monthly rates. Cash payments for overtime were found regularly on the Pacific coast, it being customary in the other regions to grant compensatory time off when in port. For all practical purposes, therefore, the Atlantic and Gulf coast monthly rates may be considered as net earnings, whereas the Pacific monthly rates are subject to cash increases. Hence, for reasons of comparability, all tables in this article deal with the basic monthly rates, the subject of overtime on the Pacific coast being considered separately.

Wide Variation in Monthly Rates

The range of "signing on" monthly rates in deep-sea shipping is extremely wide. The lowest rate found in the sample was \$5.51, while the highest rate was \$425. Within this wide range, however, as may be seen from table 2, the heaviest concentration of workers occurred in the classes of \$40 and under \$75 per month, 62.6 percent of all employees falling within these limits. This group embraced the great bulk of the unlicensed personnel. Another concentration was found in the classes of \$100 and under \$180, comprising 17.2 percent of all workers, chiefly licensed officers below the rank of master and chief engineer. Masters and chief engineers are found in the small concentration between \$240 and \$320. In contrast to this concentration, there is a small but unique concentration in the classes of \$5 to \$20, which is made up chiefly of orientals in the stewards' department on Pacific passenger vessels.

TABLE 2.—*Distribution of Employees in Deep-Sea Shipping According to Monthly Rates, 1935*

Monthly rates	Number of employees	Simple percentage	Cumulative percentage	Monthly rates	Number of employees	Simple percentage	Cumulative percentage
\$5 and under \$10.....	161	0.7	0.7	\$110 and under \$120.....	348	1.5	82.6
\$10 and under \$15.....	192	.8	1.5	\$120 and under \$130.....	631	2.7	85.3
\$15 and under \$20.....	95	.4	1.9	\$130 and under \$140.....	520	2.3	87.6
\$20 and under \$25.....	50	.3	2.2	\$140 and under \$150.....	504	2.2	89.8
\$25 and under \$30.....	159	.7	2.9	\$150 and under \$160.....	560	2.4	92.2
\$30 and under \$35.....	453	1.9	4.8	\$160 and under \$170.....	352	1.5	93.7
\$35 and under \$40.....	561	2.5	7.3	\$170 and under \$180.....	394	1.8	95.5
\$40 and under \$45.....	3,224	14.0	21.3	\$180 and under \$190.....	146	.6	96.1
\$45 and under \$50.....	1,459	6.3	27.6	\$190 and under \$200.....	85	.4	96.5
\$50 and under \$55.....	1,703	7.4	35.0	\$200 and under \$220.....	97	.4	96.9
\$55 and under \$60.....	2,771	12.0	47.0	\$220 and under \$240.....	85	.3	97.2
\$60 and under \$65.....	2,005	8.8	55.8	\$240 and under \$260.....	102	.5	97.7
\$65 and under \$70.....	1,748	7.5	63.3	\$260 and under \$280.....	152	.7	98.4
\$70 and under \$75.....	1,501	6.6	69.9	\$280 and under \$300.....	124	.5	98.9
\$75 and under \$80.....	726	3.1	73.0	\$300 and under \$320.....	110	.5	99.4
\$80 and under \$85.....	435	1.9	74.9	\$320 and under \$340.....	66	.3	99.7
\$85 and under \$90.....	238	1.0	75.9	\$340 and under \$360.....	33	.1	99.8
\$90 and under \$95.....	358	1.6	77.5	\$360 and over.....	46	.2	100.0
\$95 and under \$100.....	175	.8	78.3	Total.....	23,017	100.0	-----
\$100 and under \$110.....	648	2.8	81.1				

* This is, of course, exclusive of perquisites, consisting largely of food and quarters aboard ship.

Occupational Differentials of Basic Importance

Although many factors combine to form the monthly rate of the ship worker, the chief contributing element is the occupational status. In the occupational averages covering all services in the country as a whole, as shown in table 3, definite and pronounced differentials are found between the pay of the various ranks that mark the relative degrees of training and responsibility involved.

Among the licensed officers in the deck department, the average monthly rates ranged from \$106.21 for "other officers" (fourth mates and junior officers) to \$302.76 for masters. One-half of this large differential of nearly \$200 is due to a spread between the averages of masters and the next rank of chief officers. Hence, the unique position occupied by the master aboard his ship in terms of responsibility is also reflected in his compensation. On the other hand, the differentials between the averages of the remaining ranks are much smaller, the amounts decreasing by more or less equal steps from chief officer to "other officers."

Able and ordinary seamen are the most numerous groups among the unlicensed deck personnel. A considerable differential, \$17.56, was found between their average rates, marking the superior experience and ability expected of the able seaman. Only a moderate advance in average rate was accorded able seamen when they were assigned the duties of quartermaster and wheelsman and "other petty officers." The duties entailed in the positions of boatswain and carpenter, however, are such as to produce a substantial increase over the average rate of able seamen. The demarcation between these highest paid petty officers and the lowest paid licensed officers, however, was quite large. The average rates of cadets and apprentices and deck boys were substantially lower than those of ordinary seamen.

In the engine department, the range among the licensed officers was from \$99.60 for junior engineers to \$268.03 for chief engineers. Although the chief engineers' average rate was substantially higher than the average rate of executive first assistant engineers, the differential was not nearly so large as that found in the deck department between masters and chief officers. While the monthly rates of the engine department officers averaged somewhat more than those of corresponding deck officers in the majority of cases, the differentials between them were not great, excepting the spread between the average rates of chief engineers and masters.

TABLE 3.—Number of Employees and Average Monthly Rates, by Department and Occupation, Type of Service, and Region, 1935

Department and occupation	All services							
	United States		North Atlantic		South Atlantic and Gulf		Pacific	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
<i>Deck department</i>								
Masters	347	\$302.76	199	\$296.32	49	\$305.87	99	\$314.15
Chief officers	44	199.36	32	191.92			12	219.17
First mates	387	172.57	224	171.82	56	178.36	107	171.12
Second mates	381	149.58	226	149.15	54	157.17	101	146.49
Third mates	376	133.39	215	131.74	56	142.59	105	131.86
Other officers	58	106.21	26	99.42			32	111.72
Radio operators	356	113.54	205	109.55	54	106.67	97	125.77
Radio assistants and thirds	169	112.32	113	110.95	6	(1)	50	117.70
Boatswains	325	72.29	188	70.44	50	71.55	87	76.72
Carpenters	182	73.94	105	72.33	14	73.25	63	76.79
Quartermasters and wheelmen	467	65.68	333	64.60	9	(1)	125	68.78
Other petty officers	202	62.58	161	60.80	1	(1)	40	69.81
Able seamen	2,720	60.80	1,436	58.46	326	59.11	958	64.88
Ordinary seamen	958	43.24	553	41.93	118	42.29	287	46.17
Cadets	229	36.56	154	36.75	35	35.79	40	36.50
Apprentices and deck boys	85	32.85	22	25.34	19	25.00	44	40.00
<i>Engine department</i>								
Chief engineers	375	268.03	223	263.70	55	273.78	97	274.70
First assistant engineers, executive	23	205.88	13	195.79			10	219.00
First assistant engineers, standing watch	384	173.52	227	173.94	56	180.32	101	168.81
Second assistant engineers	388	151.04	227	150.34	56	157.18	105	149.29
Third assistant engineers	370	135.66	221	134.27	57	142.54	92	134.73
Fourth, fifth, and sixth assistant engineers	57	118.16	31	113.71			26	123.46
Junior engineers	208	99.60	150	96.47	6	(1)	52	110.02
Chief refrigeration engineers and chief electricians	133	129.04	100	126.24	2	(1)	31	136.39
Second and third refrigeration engineers and second and third electricians	143	97.68	101	94.28	4	(1)	38	105.18
Other petty officers	345	80.30	162	78.84	22	81.82	161	81.57
Oilers and water tenders	1,854	69.42	1,144	68.12	198	68.77	512	72.58
Firemen	1,565	61.14	908	58.85	173	60.06	484	65.80
Wipers and coal passers	875	50.10	472	49.55	89	50.34	314	50.88
Cadets	37	37.97	22	40.44	10	36.50	5	(1)
<i>Stewards' department</i>								
Chief stewards	305	130.35	186	132.21	51	122.35	68	131.26
Second stewards	91	103.13	65	98.42	4	(1)	22	121.02
Third stewards	89	73.65	55	73.15	1	(1)	33	73.98
Chefs	132	123.74	89	129.58	8	123.44	35	108.95
First cooks	193	100.30	102	104.47	16	95.63	75	95.85
Second cooks	404	82.91	229	83.30	55	82.03	120	82.55
Third cooks	107	71.93	79	76.77	1	(1)	27	57.45
Miscellaneous cooks	358	62.73	250	63.72	8	(1)	100	60.02
Chief butchers	78	85.36	55	88.94	1	(1)	22	76.43
Other butchers	42	54.66	24	60.83			18	46.42
Chief bakers	84	106.80	60	113.73	5	(1)	19	86.73
Other bakers	82	70.21	59	78.03	1	(1)	22	48.79
Scullions	647	41.43	467	41.17	19	41.58	161	42.15
Waiters, countermen, and salon stewards	2,114	40.00	1,478	40.09	35	41.71	601	39.66
Deck stewards	111	43.02	85	40.59			26	50.96
Cabin stewards	481	37.71	340	41.35	4	(1)	137	28.46
Bellboys	256	32.14	171	31.19	1	(1)	84	34.05
Deck watchmen, patrol	148	47.31	89	45.97	5	(1)	54	50.20
Stewardesses	179	44.25	129	42.26	5	(1)	45	50.33
Messmen	780	45.60	395	42.83	67	42.72	318	49.64
Messboys	645	39.68	385	37.96	93	37.80	167	44.69
Porters and laundrymen	381	41.46	252	41.67	3	(1)	126	40.91
Miscellaneous clerks, purser's and stewards' departments	223	76.11	143	72.28	1	(1)	79	83.25
Other employees, purser's and stewards' departments	356	65.13	238	69.02	1	(1)	117	57.17
Pantrymen, buffet attendants, and assistants	177	49.60	134	50.66			43	46.28
Miscellaneous stewards (bar, lounge, smoking room, and wine)	135	43.71	104	43.21	1	(1)	30	44.39
Chief musicians, orchestra leaders, and other musicians	155	72.14	75	80.26			80	64.52
<i>Other</i>								
Purser	88	155.40	57	154.48	3	(1)	28	150.64
Purser's assistants	57	106.51	40	96.15	1	(1)	16	132.81
Surgeons	76	135.26	54	134.91	5	(1)	17	142.94

See footnotes at end of table.

TABLE 3.—Number of Employees and Average Monthly Rates, by Department and Occupation, Type of Service, and Region, 1935—Continued

Department and occupation	Passenger ships ²					
	United States		North Atlantic		Pacific	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
<i>Deck department</i>						
Masters.....	80	\$342.10	54	\$339.91	21	\$352.06
Chief officers.....	42	200.52	31	192.46	11	223.18
First mates.....	100	173.63	67	170.43	28	178.21
Second mates.....	96	149.81	71	148.54	20	150.00
Third mates.....	91	132.39	66	129.80	20	135.75
Other officers.....	32	101.56	19	102.89	13	99.62
Radio operators.....	90	130.53	65	126.97	20	143.25
Radio assistants and thirds.....	160	112.76	107	111.14	47	118.94
Boatswains.....	91	71.27	67	68.74	19	81.05
Carpenters.....	80	74.55	63	72.44	16	82.50
Quartermasters and wheelsmen.....	292	64.25	225	62.64	64	70.00
Other petty officers.....	197	62.57	157	60.72	40	69.81
Able seamen.....	867	59.17	588	57.44	249	63.46
Ordinary seamen.....	319	42.48	193	40.26	116	46.38
Cadets.....	149	36.82	114	36.54	20	37.93
Apprentices and deck boys.....	27	37.22	7	20.20	20	40.00
<i>Engine department</i>						
Chief engineers.....	90	294.90	64	292.21	21	303.29
First assistant engineers, executive.....	23	205.88	13	195.79	10	219.00
First assistant engineers, standing watch.....	101	177.53	75	177.27	21	175.24
Second assistant engineers.....	98	155.37	70	152.02	23	163.04
Third assistant engineers.....	93	137.23	67	134.89	21	141.19
Fourth, fifth, and sixth assistant engineers.....	30	117.17	26	114.42	4	(1)
Junior engineers.....	195	100.45	146	96.63	48	112.10
Chief refrigeration engineers and chief electricians.....	118	128.73	88	126.61	29	131.07
Second and third refrigeration engineers and second and third electricians.....	138	97.31	99	93.96	37	105.32
Other petty officers.....	144	80.90	79	76.47	65	86.28
Oilers and water tenders.....	728	69.06	517	67.58	193	73.20
Firemen.....	627	59.82	432	58.09	180	64.15
Wipers and coal passers.....	362	48.31	232	47.30	119	50.46
Cadets.....	15	35.35	10	36.53	2	(1)
<i>Stewards' department</i>						
Chief stewards.....	88	162.51	63	161.83	20	167.25
Second stewards.....	91	103.13	65	98.42	22	121.02
Third stewards.....	99	73.65	55	73.15	33	73.98
Chefs.....	78	137.88	56	141.72	17	128.87
First cooks.....	51	103.38	33	119.35	18	74.10
Second cooks.....	126	93.49	84	95.78	36	88.45
Third cooks.....	106	71.95	79	76.77	26	56.97
Miscellaneous cooks.....	335	61.63	244	63.98	83	54.36
Chief butchers.....	78	85.36	55	88.94	22	76.43
Other butchers.....	42	54.66	24	60.83	18	46.42
Chief bakers.....	82	107.21	58	114.54	19	86.73
Other bakers.....	81	70.21	58	78.17	22	48.79
Scullions.....	592	40.82	440	40.88	143	40.88
Waiters, countermen, and salon stewards.....	2,072	39.89	1,455	40.07	585	39.33
Deck stewards.....	109	43.03	83	40.54	26	50.96
Cabin stewards.....	463	37.18	322	40.80	137	28.46
Bellboys.....	256	32.14	171	31.19	84	34.05
Deck watchmen, patrol.....	145	47.29	87	45.93	53	50.20
Stewardesses.....	179	44.25	129	42.26	45	50.33
Messmen.....	304	44.71	193	42.97	104	48.02
Messboys.....	213	39.19	151	36.91	58	45.15
Porters and laundrymen.....	375	41.37	249	41.60	126	40.91
Miscellaneous clerks, pursers' and stewards' departments.....	218	76.03	141	72.50	76	82.78
Other employees, pursers' and stewards' departments.....	355	65.17	237	69.10	117	57.17
Pantrymen, buffet attendants, and assistants.....	177	49.60	134	50.66	43	46.28
Miscellaneous stewards (bar, lounge, smoking room, and wine).....	135	43.71	104	43.21	30	44.39
Chief musicians, orchestra leaders, and other musicians.....	155	72.14	75	80.26	80	64.52
<i>Other</i>						
Pursers.....	77	157.86	53	154.82	23	164.78
Pursers' assistants.....	57	106.51	40	96.15	16	132.81
Surgeons.....	71	138.80	51	138.43	15	148.67

See footnotes at end of table.

TABLE 3.—Number of Employees and Average Monthly Rates, by Department and Occupation, Type of Service, and Region, 1935—Continued

Department and occupation	Freight ships							
	United States		North Atlantic		South Atlantic and Gulf		Pacific	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
<i>Deck department</i>								
Masters	224	\$284.14	114	\$267.35	35	\$301.22	75	\$301.70
Chief officers	2	(1)	1	(1)			1	(1)
First mates	239	167.64	121	165.40	42	174.95	76	167.17
Second mates	239	145.45	121	143.07	40	154.18	78	144.68
Third mates	240	130.28	118	127.21	41	139.63	81	130.00
Other officers	26	111.92	7	(1)			19	120.00
Radio operators	222	107.96	108	99.64	40	104.63	74	121.80
Radio assistants and thirds	9	104.44	6	(1)			3	(1)
Boatswains	192	70.61	91	67.53	36	69.93	65	75.31
Carpenters	94	72.80	40	71.26	7	(1)	47	74.84
Quartermasters and wheelmen	125	64.84	58	62.29	6	(1)	61	67.50
Other petty officers	5	(1)	4	(1)	1	(1)		
Able seamen	1,572	60.84	657	57.29	243	58.57	672	65.12
Ordinary seamen	525	42.09	277	40.15	82	40.91	166	45.90
Cadets	79	35.73	40	37.33	28	34.64	11	32.73
Apprentices and deck boys	58	30.82	15	23.50	19	25.00	24	40.00
<i>Engine department</i>								
Chief engineers	235	253.92	123	242.02	40	270.63	72	264.96
First assistant engineers, standing watch	240	167.88	121	165.94	42	177.57	77	165.65
Second assistant engineers	243	145.63	123	143.54	41	154.07	79	144.49
Third assistant engineers	229	131.41	119	128.12	42	139.64	68	132.07
Fourth, fifth, and sixth assistant engineers	27	119.26	5	(1)			22	121.36
Junior engineers	8	(1)	2	(1)	5	(1)	1	(1)
Chief refrigeration engineers and chief electricians	15	131.47	12	123.50	1	(1)	2	(1)
Second and third refrigeration engineers and second and third electricians	5	(1)	2	(1)	2	(1)	1	(1)
Other petty officers	123	75.49	24	68.33	6	(1)	93	77.69
Oilers and water tenders	987	68.90	525	67.19	153	68.27	309	72.12
Firemen	833	61.36	411	58.27	131	59.33	291	66.63
Wipers and coal passers	405	48.77	163	46.60	56	48.30	186	50.82
Cadets	22	39.75	12	43.71	7	(1)	3	(1)
<i>Stewards' department</i>								
Chief stewards	172	112.13	90	108.72	37	117.70	45	114.34
Chefs	52	103.24	31	109.23	3	(1)	18	90.14
First cooks	110	97.35	46	91.81	10	93.00	54	102.87
Second cooks	238	77.20	116	74.38	38	79.51	84	80.03
Third cooks	1	(1)					1	(1)
Miscellaneous cooks	23	78.61	6	(1)			17	87.65
Chief bakers	2	(1)	2	(1)				
Other bakers	1	(1)	1	(1)				
Scullions	45	47.47	21	44.81	6	(1)	18	52.22
Waiters, countermen, and salon stewards	39	44.42	23	41.30	3	(1)	13	50.96
Deck stewards	2	(1)	2	(1)				
Cabin stewards	2	(1)	2	(1)				
Deck watchmen, patrol	3	(1)	2	(1)			1	(1)
Messmen	419	46.53	165	42.68	41	41.83	213	50.41
Messboys	367	38.95	186	37.13	82	37.13	99	43.88
Porters and laundrymen	6	(1)	3	(1)	3	(1)		
Miscellaneous clerks, purser's and stewards' departments	5	(1)	2	(1)			3	(1)
Other employees, purser's and stewards' departments	1	(1)	1	(1)				
<i>Other</i>								
Purser	11	138.18	4	(1)	2	(1)	5	(1)
Surgeons	5	(1)	3	(1)			2	(1)

See footnotes at end of table.

TABLE 3.—Number of Employees and Average Monthly Rates, by Department and Occupation, Type of Service, and Region, 1935—Continued

Department and occupation	Tankers ^a					
	United States		North Atlantic		South Atlantic and Gulf	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
<i>Deck department</i>						
Masters.....	43	\$326.58	31	\$326.94	9	\$313.89
First mates.....	48	194.90	36	195.98	9	187.22
Second mates.....	46	170.57	34	172.09	9	165.00
Third mates.....	45	152.00	31	152.90	10	150.00
Radio operators.....	44	106.91	32	107.63	9	105.00
Boatswains.....	42	82.19	30	83.07	9	80.00
Carpenters.....	8	(1)	2	(1)	6	(1)
Quartermasters and wheelmen.....	50	76.13	50	76.13		
Able seamen.....	281	65.62	191	65.64	53	62.50
Ordinary seamen.....	114	50.69	83	51.73	26	47.50
Cadets.....	1	(1)			1	(1)
<i>Engine department</i>						
Chief engineers.....	50	285.96	36	287.08	10	276.30
First assistant engineers, standing watch.....	43	195.60	31	197.13	9	187.22
Second assistant engineers.....	47	170.02	34	171.50	10	165.00
Third assistant engineers.....	48	152.92	35	154.00	10	150.00
Junior engineers.....	5	(1)	2	(1)		
Other petty officers.....	78	86.79	59	86.27	16	86.25
Oilers and water tenders.....	139	74.97	102	75.63	27	72.44
Firemen.....	105	67.25	65	67.63	27	65.00
Wipers and coal passers.....	108	61.10	77	62.55	22	57.50
<i>Stewards' department</i>						
Chief stewards.....	45	137.11	33	139.69	9	125.00
Chefs.....	2	(1)	2	(1)		
First cooks.....	32	106.07	23	108.45	6	(1)
Second cooks.....	40	83.56	29	82.84	11	85.45
Scullions.....	10	50.00	6	(1)	4	(1)
Waiters, countermen, and salon stewards.....	3	(1)				
Cabin stewards.....	16	52.50	16	52.50		
Messmen.....	57	43.51	37	42.77	19	44.34
Messboys.....	65	45.40	48	44.51	7	(1)

^a Not sufficient data to compute an average.

^b Not sufficient data to show separate figures for South Atlantic and Gulf States; figures included in United States totals.

^c Not sufficient data to show separate figures for Pacific States; figures included in United States totals.

The unlicensed engine personnel contains a relatively highly paid group of chief refrigeration engineers and chief electricians and their respective second and third assistants, the chiefs averaging approximately \$30 more than their assistants. These, in turn, enjoyed a substantial differential over the group of "other petty officers." The bulk of engine personnel showed oilers and water tenders averaging nearly \$9 more than able seamen, firemen averaging approximately the same as able seamen, and wipers and coal passers averaging about \$10 less than able seamen, but nearly \$7 more than ordinary seamen. Cadets averaged approximately the same rates in both deck and engine departments.

The occupational structure of the stewards' department differs in important respects from that of the deck and engine departments. The variety of occupations is much greater in the stewards' department, the scale of rates is generally much lower, and the factors of race and color of workers, as well as type of service and region, influence the stewards' averages far more than is true in the case of deck and engine workers.

The occupation of chief steward is the highest paid in this department, but its average monthly rate falls slightly below the averages of either third mates or third assistant engineers. The occupation of chef, occurring chiefly in the passenger service, stands out with an average rate of only about \$7 less than that of chief steward. Other important occupations, such as chief bakers, second stewards, and first cooks, follow with average rates exceeding \$100 per month. An intermediate group, consisting of chief butchers, second and third cooks, third stewards, miscellaneous clerks, musicians, and "other bakers", averaged from approximately \$65 to \$85. The bulk of workers in this department, however, including scullions, waiters, canteenmen, salon stewards, deck and cabin stewards, messmen, messboys, etc., averaged from \$32 to \$63, the majority receiving between \$40 and \$45 base pay per month.

Occupational Averages by Type of Service

The absence of employees in many occupations in the freight and tanker services, as contrasted with a complete representation of all occupations aboard passenger ships, is also noted in table 3. This greater variety of occupations in the passenger service was found particularly in the stewards' department, the workers in this group aboard freight and tank ships being confined to such essential occupations as chief steward, cooks, messmen, and messboys, which are necessary to the maintenance of the ship's company. In the deck and engine departments, certain differences also occurred, notably the absence aboard freight and tank ships of many of the executive and junior officers and some petty officers whose services are needed aboard ships in the passenger service.

Although the occupational averages for the country as a whole in the deck department of the three types of service followed in general the same vertical structure as in the industry as a whole, several notable differences were found among the averages for identical occupations in the three services.

Masters were highest paid, on the average, in the passenger service and lowest paid aboard freighters. The tanker average rate for masters was notably higher than that of freight ship masters, but it was only a few dollars less than the passenger average. As regards the average rates of first, second, and third mates, the officers in the passenger service earned slightly more than those in the freight service. The tanker average rates for these officers, however, were respectively much higher than those on passenger ships. Radio operators' rates averaged highest aboard passenger ships, whereas the averages on freight and tank ships were approximately the same. Among the able and ordinary seamen, the only significant differentials were in favor of tank ships, the passenger average rates being nearly

identical with the freight averages. The same situation applied to the average rates for boatswains, quartermasters, and wheelmen.

In the engine department, the average rate for chief engineers followed the same order as for masters, the passenger average being highest and the freight average lowest, with the tanker average intermediate but approaching more nearly the passenger average. Among first, second, and third assistant engineers, the average rates definitely favored the passenger over the freight service. In this case, as in the deck department, the tank ship averages showed notable differentials over those of the passenger service. Among the unlicensed engine personnel, the freight and passenger averages were strikingly similar, as they were also among unlicensed deck workers. The tanker averages in the engine department, on the other hand, stood out as the highest in the three services.

In the stewards' department, some of the key positions were best paid on passenger ships and lowest paid on freighters. Among many other groups of workers, such as scullions, waiters, and messmen, the passenger average rates were often lowest, due to having certain classes of employees, notably orientals in the Pacific region.

From the foregoing averages, it may be seen that the tank-ship rates were often the highest in the three services, the notable exceptions being in the averages for the key positions, such as masters, chief engineers, chief stewards, and radio operators, who were best paid on passenger ships. On the other hand, the freight-ship averages in most cases were less than those in the passenger service, although notable exceptions to this appear among the lower occupations.

Occupational Averages by Region⁵

The occupational wage structure in the several services by regions—North Atlantic, South Atlantic and Gulf, and Pacific—did not deviate radically from that in the industry as a whole. However, there were conspicuous differentials in the averages for given occupations between the different regions.

In the passenger service, the Pacific averages were higher than the North Atlantic averages in virtually all deck and engine occupations. In the stewards' department, however, the reverse was true in most cases, many of the Pacific averages being sharply reduced by the presence of oriental workers.

In the freight service, higher Pacific averages are again in evidence, as compared with North Atlantic averages, which applied also to the stewards' department, reflecting the absence in the Pacific freight service of the low-paid oriental group found in the passenger coverage. The South Atlantic and Gulf averages for freight ships were higher for deck and engine officers than in the other two regions, although

⁵ For recent increases affecting employees on Pacific coast, see *Monthly Labor Review* for April 1937 (pp. 819-826).

the rates of the unlicensed deck and engine personnel were similar to those in the North Atlantic region and lower than the corresponding Pacific averages. The average rates of stewards' workers followed in general the same pattern as the unlicensed deck and engine personnel.

The tanker averages showed slightly lower rates in the South Atlantic and Gulf region than in the North Atlantic region.

OVERTIME PAY⁶ ON THE PACIFIC COAST

The extent of the overtime earnings reported for workers on the Pacific coast makes it apparent that the "signing on" monthly rates greatly underestimate some of the true earning possibilities in that region. The payment of overtime here is largely attributable to the existence of union agreements, which cover virtually all employees on the Pacific coast.

The average overtime earnings in the Pacific coast region were computed on a daily basis. This was done by adding together the total overtime payments, which cover voyages of varying lengths as reported for the different ships, and dividing the sum by the corresponding number of man-days.

The average overtime for all Pacific coast employees combined amounted to 38 cents per day. It will be seen from table 4, however, that the averages for coastwise trade were many times larger than those found in the intercoastal and foreign trade. It will also be seen that the freight averages were more than twice the size of the passenger averages.

TABLE 4.—Average Daily Overtime Earnings of Employees on the Pacific Coast,
by Trade Route and Type of Service,¹ 1935

Trade route	Total		Passenger ships		Freight ships	
	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings
Total.....	6,833	\$0.38	3,603	\$0.25	3,230	\$0.53
Coastwise.....	2,325	.93	1,260	.63	1,065	1.28
Intercoastal.....	2,094	.14	421	.07	1,673	.16
Foreign.....	2,414	.07	1,922	.03	492	.20

¹ Due to the small coverage, the data for tankers have been omitted from this tabulation.

The coastwise overtime was outstandingly large, due to the relative frequency of days in port for coastwise ships, when crews are customarily called upon to work ship and cargo in order to expedite the vessel's turn around. This is in contrast to the many days at sea for intercoastal and foreign-bound ships, when few overtime opportunities exist.

The average daily overtime earnings by occupation, classified according to type of service and trade route, are shown in table 5.

⁶ Includes also a limited amount of extra earnings for handling penalty cargos.

TABLE 5.—*Average Daily Overtime Earnings of Employees on the Pacific Coast, by Department and Occupation, Type of Service,¹ and Trade Route, 1935*

Department and occupation	Passenger service							
	Total		Coastwise		Intercoastal		Foreign	
	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings
<i>Deck department</i>								
Masters.....	21	(2)	8	(2)	2	(2)	11	(2)
Chief officers.....	11	\$0.08	2	(2)	2	(2)	7	\$0.05
First mates.....	28	.43	17	\$0.43	2	(2)	9	.42
Second mates.....	20	.81	9	1.39	2	(2)	9	.31
Third mates.....	20	.86	9	1.52	2	(2)	9	.28
Other officers.....	13	.14	4	(2)			9	.14
Radio operators.....	20	.13	9	.28	2	(2)	9	(2)
Radio assistants and thirds.....	47	.23	21	.51	5	(2)	21	(2)
Boatswains.....	19	1.31	7	3.13	2	(2)	10	.23
Carpenters.....	17	.22	3	(2)	2	(2)	12	.14
Quartermasters and wheelmen.....	64	.17	19	.24	9	\$0.26	36	.11
Other petty officers.....	40	.54	10	1.83	8	.13	22	.10
Able seamen.....	249	.75	80	2.08	32	.18	137	.11
Ordinary seamen.....	116	.73	22	3.39	24	.19	70	.07
Cadets.....	29	(2)					29	(2)
Apprentices and deck boys.....	20	1.35	17	1.59			3	(2)
<i>Engine department</i>								
Chief engineers.....	21	.01	9	.01	2	(2)	10	(2)
First assistant engineers, executive.....	10	.05	1	(2)	2	(2)	7	(2)
First assistant engineers, standing watch.....	21	.49	12	.83			9	.04
Second assistant engineers.....	24	.39	10	.84	4	(2)	10	.04
Third assistant engineers.....	21	.34	7	.97	2	(2)	12	.03
Fourth, fifth, and sixth assistant engineers.....	4	(2)					4	(2)
Junior engineers.....	48	.25	11	.63	6	(2)	31	.09
Chief refrigeration engineers and chief electricians.....	29	.15	6	(2)	4	(2)	19	.03
Second and third refrigeration engineers and second and third electricians.....	37	.10	6	(2)	8	.12	23	.07
Other petty officers.....	65	1.08	27	2.54	8	.05	30	.03
Oilers and water tenders.....	193	.36	70	.85	25	.14	98	.07
Firemen.....	180	.23	68	.51	26	.05	86	.06
Wipers and coal passers.....	119	.13	27	.55	13	.01	79	.01
Cadets.....	2	(2)					2	(2)
<i>Stewards' department</i>								
Chief stewards.....	20	(2)	9	(2)	2	(2)	9	(2)
Second stewards.....	22	.40	10	.87	2	(2)	10	(2)
Third stewards.....	33	.19	11	.57	4	(2)	18	.01
Chefs.....	17	.43	9	.79	2	(2)	6	(2)
First cooks.....	18	.04	3	(2)	2	(2)	13	(2)
Second cooks.....	36	.24	17	.51	2	(2)	17	(2)
Third cooks.....	26	.16	12	.34	2	(2)	12	(2)
Miscellaneous cooks.....	83	.11	28	.31	10	(2)	45	(2)
Chief butchers.....	22	.14	9	.35	4	(2)	9	(2)
Other butchers.....	18	.06	6	(2)	2	(2)	10	(2)
Chief bakers.....	19	.15	8	.33	2	(2)	9	.01
Other bakers.....	22	.08	6	(2)	5	(2)	11	(2)
Scullions.....	144	.17	61	.40	11	(2)	72	(2)
Waiters, countermen, and salon stewards.....	585	.13	210	.37	70	(2)	305	(2)
Deck stewards.....	26	.04	7	.16	5	(2)	14	(2)
Cabin stewards.....	137	(2)	28	(2)			109	(2)
Bell boys.....	84	.03	37	.08	14	(2)	33	(2)
Deck watchmen, patrol.....	53	.26	23	.52	2	(2)	28	.07
Stewardesses.....	45	.01	17	.02	5	(2)	23	(2)
Messmen.....	104	.14	24	.51	13	(2)	67	.03
Messboys.....	58	.16	19	.48	11	(2)	28	(2)
Porters and laundrymen.....	126	.02	59	.04	8	(2)	59	(2)
Miscellaneous clerks, purser's and stewards' departments.....	75	.04	34	.08	6	(2)	35	(2)
Other employees, purser's and stewards' departments.....	115	.02	41	.05	19	(2)	55	(2)
Pantrymen, buffet attendants, and assistants.....	43	.34	21	.70	5	(2)	17	(2)
Miscellaneous stewards (bar, lounge, smoking room, and wine).....	30	.08	11	.21	2	(2)	17	(2)
Chief musicians, orchestra leaders, and other musicians.....	80	(2)	35	.01	10	(2)	35	(2)
<i>Other</i>								
Purser.....	23	(2)	9	(2)	3	(2)	11	(2)
Purser's assistants.....	16	(2)	4	(2)	1	(2)	11	(2)
Surgeons.....	15	(2)	1	(2)	3	(2)	11	(2)

See footnotes at end of table.

TABLE 5.—*Average Daily Overtime Earnings of Employees on the Pacific Coast, by Department and Occupation, Type of Service,¹ and Trade Route, 1935—Continued*

Department and occupation	Freight service							
	Total		Coastwise		Intercoastal			
	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings	Number of employees	Average daily overtime earnings	Number of employees	
<i>Deck department</i>								
Masters.....	75	(1)	32	(1)	33	(1)	10	(1)
Chief officers.....	1	(1)					1	(1)
First mates.....	76	\$1.33	36	\$2.42	31	\$0.31	9	\$0.50
Second mates.....	78	1.09	31	2.43	34	.20	13	.24
Third mates.....	81	.99	30	2.32	37	.20	14	.22
Other officers.....	19	.04			18	.04	1	(1)
Radio operators.....	74	.06	25	.16	37	(1)	12	(1)
Radio assistants and thirds.....	3	(1)	3	(1)				
Boatmen.....	65	.41	12	.98	44	.28	9	.23
Carpenters.....	47	.29	7	.64	30	.19	10	.34
Quartermasters and wheelmen.....	61	.20			61	.20		
Able seamen.....	672	.98	287	1.99	295	.20	90	.28
Ordinary seamen.....	166	.51	19	2.78	111	.22	36	.21
Cadets.....	11	.04					11	.04
Apprentices and deck boys.....	24	.22	13	.26	11	.16		
<i>Engine department</i>								
Chief engineers.....	72	.01	31	.02	30	(1)	11	(1)
First assistant engineers, standing watch.....	77	.46	31	.89	34	.14	12	.21
Second assistant engineers.....	79	.47	31	.84	35	.25	13	.14
Third assistant engineers.....	68	.19	15	.32	36	.18	17	.08
Fourth, fifth, and sixth assistant engineers.....	22	.21			16	.29	6	(1)
Junior engineers.....	1	(1)	1	(1)				
Chief refrigeration engineers and chief electricians.....	2	(1)			2	(1)		
Second and third refrigeration engineers and second and third electricians.....	1	(1)			1	(1)		
Other petty officers.....	93	1.70	62	2.36	27	.41	4	(1)
Oilers and water tenders.....	309	.28	92	.55	175	.15	42	.22
Firemen.....	291	.35	119	.45	130	.23	42	.46
Wipers and coal passers.....	186	.11	29	.54	119	.03	38	.03
Cadets.....	3	(1)					3	(1)
<i>Stewards' department</i>								
Chief stewards.....	45	.31	9	1.38	26	.05	10	.04
Chefs.....	18	.25	4	(1)	10	.12	4	(1)
First cooks.....	54	.23	9	.30	36	.19	9	.30
Second cooks.....	84	.26	13	1.04	57	.11	14	.15
Third cooks.....	1	(1)	1	(1)				
Miscellaneous cooks.....	17	1.19	14	1.44	3	(1)		
Scullions.....	18	1.14	16	1.29	2	(1)		
Waiters, countermen, and salon stewards.....	13	1.09	7	1.93	6	(1)		
Deck watchmen, patrol.....	1	(1)	1	(1)				
Messmen.....	213	.18	41	.64	142	.06	30	.15
Messboys.....	99	.43	37	1.00	44	.10	18	.06
Miscellaneous clerks, purser's and stewards' departments.....	3	(1)	2	(1)			1	(1)
<i>Other</i>								
Purser.....	5	(1)	5	(1)				
Surgeons.....	2	(1)					2	(1)

¹ Due to the small coverage, the data for tankers have been omitted from this tabulation.

² No overtime.

³ Not sufficient data to compute an average.

⁴ Less than 1 cent.

As regards coastwise trade in the passenger service, the highest overtime averages appear in the deck department, where 7 occupations showed averages exceeding \$1 per day. These were as follows: Ordinary seamen, \$3.39; boatmen, \$3.13; able seamen, \$2.08; "other

petty officers," \$1.83; apprentices and deck boys, \$1.59; third mates, \$1.52; and second mates, \$1.39. In the engine department, only one such occupation was found, namely, "other petty officers," at \$2.54 per day. None of the occupations in the stewards' department had an average in excess of \$1 per day.

In the passenger intercoastal and foreign services, relatively small average daily overtime earnings were found in most of the deck and engine occupations, with virtually no overtime earnings appearing in the stewards' department.

In the freight service, overtime was earned by virtually all members of the crew, including stewards' workers. On coastwise freighters, averages exceeding \$1 per day were found in five deck occupations, one engine occupation, and seven stewards' occupations, as follows: Deck watchmen, \$3.14; ordinary seamen, \$2.78; second mates, \$2.43; first mates, \$2.42; "other petty officers" (engine), \$2.36; third mates, \$2.32; able seamen, \$1.99; waiters and countermen, \$1.93; miscellaneous cooks, \$1.44; chief stewards, \$1.38; scullions, \$1.29; second cooks, \$1.04; and messboys, \$1. In the intercoastal and foreign freight services, the averages were generally small for all occupations.

It would be interesting to compute monthly earnings for workers on the Pacific coast, so as to include both their monthly base rates and overtime earnings. This was not possible in the present survey, due to the fact that the data are based on voyages of varying lengths, the majority of which did not cover 30 continuous days of work. It is possible, however, to compute daily earnings by using a pro-rata daily base rate, to which may be added the known average daily overtime. For example, in the case of able seamen who were engaged in freight coastwise trade, the daily base rate amounted to \$2.28 and the average daily overtime to \$1.99, thus resulting in total daily earnings of \$4.27. It should be emphasized again that, in view of lay-overs between voyages, this method of computation cannot be extended to determine the total monthly earnings.

Occupational Averages by Size of Ship⁷

The size of vessel plays an important part in determining the monthly rates of licensed deck and engine officers, but it has no

⁷ Size of vessel, as appearing in this article, is measured in terms of "power tonnage", which is the number of gross tons added to the horsepower of the vessel, as shown in *Merchant Vessels of the United States*, published by the Bureau of Marine Inspection and Navigation of the Department of Commerce. The classification is as follows:

SINGLE SCREW

	<i>Power tonnage</i>
Class A-1.....	28,001 and over
Class A.....	20,001 to 28,000
Class B.....	12,001 to 20,000
Class C.....	7,501 to 12,000

Power tonnage.

Class D.....	5,001 to 7,500
Class E.....	Less than 5,001

TWIN SCREW

Class A-3.....	35,001 and over
Class A-2.....	28,001 to 35,000
Class A-1.....	20,001 to 28,000
Class A.....	15,001 to 20,000
Class B.....	9,001 to 15,000
Class C.....	5,501 to 9,000
Class D.....	3,501 to 5,500
Class E.....	Less than 3,501

apparent effect on the rates paid to most of the unlicensed personnel. The chief reason for this is the greater responsibility entailed upon licensed officers as the size of ship increases, whereas the duties of many unlicensed workers are essentially the same irrespective of the size of vessel.

Table 6 presents the average monthly rates of masters, first, second, and third mates, chief engineers, and first, second, and third assistant engineers, classified according to size of vessel for each type of service. Other licensed personnel (chief officers, executive first assistant engineers, and the various junior deck and engine officers) were excluded from the table because they are generally found only on the larger ships.

TABLE 6.—Number of Employees and Average Monthly Rates for Licensed Officers in Deck and Engine Departments, by Type of Service and Size of Ship, 1935

Type of service and size of ship	Deck department							
	Masters		First mates		Second mates		Third mates	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
Passenger ships:								
Classes A-3, A-2, A-1.....	22	\$394.92	21	\$176.90	23	\$158.37	23	\$135.99
Class A.....	11	370.45	11	179.00	11	154.09	11	138.09
Class B.....	15	328.27	25	173.30	24	147.78	23	129.33
Class C.....	19	316.37	22	172.50	23	148.67	20	133.58
Classes D and E.....	13	282.31	21	169.14	15	138.53	14	125.36
Freight ships:								
Class B.....	14	340.36	14	170.71	13	149.62	13	136.54
Class C.....	98	292.06	103	171.86	110	148.97	112	134.01
Class D.....	42	269.93	46	167.69	44	143.80	46	128.84
Class E.....	50	264.62	56	163.76	53	140.75	51	123.63
Tankers:								
Class B.....	3	335.00	3	201.50	3	175.67	3	155.00
Class C.....	33	327.58	37	196.78	36	171.64	34	153.09
Classes D and E.....	7	317.86	8	183.75	7	162.86	8	146.25
 Engine department								
Type of service and size of ship	Chief engineers		First assistant engineers		Second assistant engineers		Third assistant engineers	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate
Passenger ships:								
Classes A-3, A-2, A-1.....	22	\$327.05	26	\$183.08	24	\$165.15	20	\$143.48
Class A.....	11	310.91	11	181.36	12	161.67	11	142.64
Class B.....	23	293.64	26	176.36	23	154.26	25	136.86
Class C.....	21	276.62	21	177.76	23	150.85	24	134.69
Classes D and E.....	13	258.69	17	168.06	16	144.06	13	128.46
Freight ships:								
Class B.....	12	303.63	13	180.77	15	155.33	13	140.00
Class C.....	108	265.52	110	171.85	109	149.32	119	134.39
Class D.....	43	248.12	45	167.70	45	144.66	45	130.32
Class E.....	53	239.57	53	163.52	55	140.49	48	123.65
Tankers:								
Class B.....	5	298.00	3	201.50	3	175.67	4	155.63
Class C.....	36	288.19	33	196.86	33	172.00	37	153.18
Classes D and E.....	9	270.33	7	187.14	11	162.27	7	150.00

Among the deck officers, the average monthly rates for masters showed no exception to the rule that the amount of pay varies directly with the size of ship. Moreover, the differentials found among the averages representing the various sizes of ships were quite marked. As regards the mates, there was also direct correlation between the average rates and sizes of vessels, although there were a few notable exceptions to the rule, and the differentials were much smaller than in the case of masters.

In the engine department, the direct correlation between average rates and sizes of vessels was even more marked than among deck officers, there being but a single exception present for all grades of engineers. As in the case of the deck department, the differentials here were more marked for the chief engineers than for the assistant engineers.⁸

The averages for radio operators in the passenger service also showed monthly rates varying directly with the size of vessel. Thus, their averages descended quite regularly from \$145.95 on classes A-3, A-2, and A-1 vessels to \$121.43 on classes D and E ships. The same applied to chief stewards on passenger ships, who averaged \$188.33 on classes A-3, A-2, and A-1, \$161.82 on class A, \$158.96 on class B, \$155.88 on class C, and \$137.85 on class D and class E ships. The variation in the averages of these occupations in the passenger service in accordance with size of vessel is clearly commensurate with the degree of responsibility involved. It should be noted, however, that little or no such correlation appeared in the freight and tanker services.

⁸ The Pacific freight-ship sample included 18 steam schooners, which are not included in the averages of table 6 due to the differences in size classification as shown below. The monthly averages for licensed

officers on these boats, according to the two classifications in which they are grouped, were as follows:

Occupation	Classes A and B		Class C	
	Number of employees	Average monthly rate	Number of employees	Average monthly rate
Masters.....	14	\$274.64	6	\$245.00
First mates.....	15	155.00	5	153.00
Second mates.....	14	139.64	5	138.00
Third mates.....	16	125.63	2	(*)
Chief engineers.....	14	215.00	5	195.00
First assistant engineers.....	14	150.00	5	145.00
Second assistant engineers.....	15	135.00	4	130.00
Third assistant engineers.....	4	120.00	—	—

* No average computed.

The class of ship designations, by power tonnage, applying to steam schooners, are as follows:

	Power tonnage
Class A.....	5,001 to 7,000
Class B.....	2,501 to 5,000
Class C.....	2,500 and under

Among the rank and file of unlicensed workers, on the other hand, the correlation between average pay and size of ship, if it existed at all, was lost in the averages due to the presence of other and stronger variables. Any such correlation, furthermore, is not borne out in the unlicensed deck and engine union agreements, which rarely recognize class of ship as a factor in regulating the minimum rates of pay of unlicensed workers.

Occupational Averages by Type of Power

Type of power affected the monthly rates of licensed officers in the engine department, but it had little or no effect on the rates of other ship workers. In table 7, therefore, the averages by type of power are shown only for chief engineers and first, second, and third assistant engineers. The table is further confined to certain classes of North Atlantic freight ships and tankers, since these groups alone furnished sufficient data in the sample for comparison.

TABLE 7.—*Number of Employees and Average Monthly Rates for Licensed Officers in Engine Department, by Type of Power, North Atlantic Region, 1935*

Occupation	Freight ships							
	Class C ships engaged in foreign trade				Class D ships engaged in coastwise trade			
	Oil-burning		Diesel-engine		Oil-burning		Coal-burning	
Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	Number of employees	Average monthly rate	
Chief engineers.....	34	\$234.49	5	\$256.00	10	\$256.50	4	\$243.75
First assistant engineers.....	31	165.08	5	175.00	10	165.90	5	167.00
Second assistant engineers.....	31	145.95	4	157.00	10	140.50	4	147.00
Third assistant engineers.....	33	131.70	4	139.00	10	124.00	5	132.62
Tankers—Class C ships engaged in coastwise trade								
Chief engineers.....	17	\$279.12	12	\$301.25	—	—	—	—
First assistant engineers.....	14	192.80	12	204.35	—	—	—	—
Second assistant engineers.....	14	169.58	12	178.21	—	—	—	—
Third assistant engineers.....	18	151.67	12	157.29	—	—	—	—

The Diesel-ship average rates were consistently higher than the average rates on oil-burning vessels for similar ships and services. Between oil- and coal-burning ships, however, the few averages that are shown do not indicate conclusively that either one or the other type is better paid, chief engineers and first assistants averaging more on class D oil-burning freighters, while second and third assistant engineers averaged more on class D coal burners.

Occupational Averages by Color or Race

In classifying ship workers by color or race, the separation was made according to whites, Negroes, orientals (largely Chinese, but also some Japanese), and others (largely Filipinos and Hawaiians).

In the passenger and freight service, very few Negroes were found among petty officers in either the deck or engine departments. Colored able and ordinary seamen appeared only in the North Atlantic region. In the case of able seamen, they were paid the same average monthly rate as whites (approximately \$57.50) in the companies which had union contracts, but they received \$55, or \$2.50 less than whites in companies not having union contracts. Ordinary seamen, on the other hand, were paid the same monthly rates, regardless of color and unionization. Nearly all Negroes employed as oilers and water tenders, firemen, and wipers and coal passers were found in the North Atlantic region, and in all cases but one they received the same average rates as whites. The exception appeared in nonunion companies employing Negroes exclusively as firemen and coal passers on coal-burning passenger ships, the firemen being paid \$60 and the coal passers \$52, as compared, respectively, with \$57.50 and \$45 for whites employed exclusively on similar vessels operated by union companies.

Negro workers, however, were most numerous in the stewards' department of both passenger and freight vessels, being found in such occupations as cooks, scullions, countermen, cabin stewards, messmen, messboys, etc., in all three regions. In a number of cases, they showed the same monthly rates as white workers in corresponding occupations in union companies, but their average rates were considerably lower than those of white workers in nonunion companies. This was true of scullions, countermen, and messmen in the passenger service and of second cooks in the freight service of the North Atlantic region. (See table 8.)

Orientals were found largely in the passenger service, a limited number in the North Atlantic region, but mostly in the Pacific region. In the North Atlantic region, they averaged, in most instances, the same monthly rates as whites, but in the Pacific region their average monthly rates were much lower than those of white workers. (See table 8.) It should also be pointed out that, although the white and Negro workers on the Pacific coast were unionized, this was not true of the majority of the orientals.

No Negroes or orientals were found employed on tankers.

TABLE 8.—Number of Employees and Average Monthly Rates in Stewards' Department, by Color, Type of Service, Region, and Unionization, 1935

Occupation and color or race	Passenger service				Freight service							
	North Atlantic		Pacific		North Atlantic		South Atlantic and Gulf		Pacific			
	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union	Union	Non-union
Number of employees												
First cooks:												
White	21	6	7	—	28	3	3	—	43	—	—	—
Negro	2	—	—	—	12	3	2	—	2	—	—	—
Oriental	4	—	1	10	—	—	—	—	1	—	—	—
Other	—	—	—	—	—	—	3	—	8	—	—	—
Second cooks:												
White	55	7	16	—	46	23	13	3	62	—	—	—
Negro	4	9	8	—	31	11	14	2	3	—	—	—
Oriental	9	—	2	10	—	—	1	—	4	—	—	—
Other	—	—	—	—	—	—	—	—	15	—	—	—
Scullions:												
White	293	44	91	—	13	2	1	—	18	—	—	—
Negro	24	13	15	—	4	1	5	—	—	—	—	—
Oriental	44	—	2	32	—	—	—	—	—	—	—	—
Other	18	4	3	—	1	—	—	—	—	—	—	—
Countermen:												
White	911	143	381	—	11	5	—	—	13	—	—	—
Negro	161	216	26	—	6	1	—	—	—	—	—	—
Oriental	13	—	31	144	—	—	—	—	—	—	—	—
Other	11	—	3	—	—	—	—	3	—	—	—	—
Cabin stewards:												
White	260	—	62	—	—	—	1	—	—	—	—	—
Negro	6	—	—	—	—	—	1	—	—	—	—	—
Oriental	56	—	—	75	—	—	—	—	—	—	—	—
Messmen:												
White	135	18	97	—	67	19	11	3	160	—	—	—
Negro	21	10	4	—	58	15	21	4	3	—	—	—
Other	8	1	1	2	2	1	2	—	50	—	—	—
Messboys:												
White	112	14	54	—	96	22	35	4	77	—	—	—
Negro	17	5	1	—	47	14	23	2	3	—	—	12
Oriental	—	—	—	2	—	—	—	—	—	—	—	—
Other	3	—	1	—	3	1	18	—	7	—	—	—
Average monthly rates												
First cooks:												
White	\$126.14	\$105.00	\$152.14	—	\$91.75	(1)	(1)	(1)	\$102.67	—	—	—
Negro	(1)	—	(1)	—	93.75	(1)	(1)	(1)	(1)	—	—	—
Oriental	(1)	—	(1)	\$22.63	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	(1)	—	—	100.00	—	—	—
Second cooks:												
White	102.01	90.00	135.47	—	75.39	\$81.52	\$87.31	(1)	82.46	—	—	—
Negro	(1)	69.11	95.94	—	73.97	61.91	78.57	(1)	(1)	—	—	—
Oriental	87.83	—	(1)	16.91	—	—	—	—	(1)	—	—	—
Other	—	—	—	—	(1)	—	—	78.33	—	84.33	—	—
Scullions:												
White	41.95	40.00	50.73	—	47.23	(1)	(1)	(1)	52.22	—	—	—
Negro	41.13	32.08	52.50	—	(1)	(1)	(1)	—	—	—	—	—
Oriental	40.23	—	(1)	7.40	—	—	—	—	—	—	—	—
Other	33.33	(1)	(1)	—	(1)	—	—	—	—	—	—	—
Countermen:												
White	40.58	45.10	51.50	—	40.23	(1)	—	—	50.96	—	—	—
Negro	40.91	34.00	50.00	—	42.08	(1)	—	—	—	—	—	—
Oriental	40.00	—	15.08	10.19	—	—	—	—	—	—	—	—
Other	40.00	—	(1)	—	—	—	—	(1)	—	—	—	—
Cabin stewards:												
White	40.86	—	50.00	—	—	(1)	—	—	—	—	—	—
Negro	45.83	—	—	—	—	(1)	—	—	—	—	—	—
Oriental	40.00	—	—	10.65	—	—	—	—	—	—	—	—
Messmen:												
White	42.00	50.00	48.81	—	42.65	42.37	38.41	(1)	50.55	—	—	—
Negro	43.48	43.00	(1)	—	42.28	43.30	41.79	(1)	(1)	—	—	—
Other	41.25	(1)	(1)	(1)	(1)	(1)	(1)	(1)	50.00	—	—	—
Messboys:												
White	36.95	35.00	46.39	—	38.03	38.95	37.20	(1)	48.18	—	—	—
Negro	38.53	(1)	(1)	—	35.00	35.21	35.00	(1)	(1)	—	—	—
Oriental	(1)	—	(1)	—	(1)	(1)	39.44	—	45.71	—	—	\$15.00

¹ Not enough employees to justify the computation of an average.

Industrial Relations

INDUSTRIAL RELATIONS IN SWEDEN

By ROY E. B. BOWER, *American Consul, Stockholm*

A SIGNIFICANT characteristic of the regulation of industrial relations in Sweden is that as a rule legislation follows established practice. It is as though the parties concerned evolved, voluntarily, by trial and error and by testing each other's strength, a workable system, after which the system was defined and made legal. For example, trade-unions, which have been in existence for 50 years, were not provided for by law until 1936.

Occupations of the People

THE industrialization of Sweden has been comparatively rapid. At the beginning of the century considerably more than one-half (55.1 percent) of the population was dependent upon agriculture for a livelihood. By 1930 this proportion had been reduced to 39.4 percent, whereas the proportion of the population dependent on industry had increased from 27.8 to 35.7 percent, and the proportion dependent upon trade and traffic from 10.4 to 18.2 percent.

The distribution of establishments and employees by occupation in 1930 is shown in table 1. Out of a total employed population of 2,290,460, 910,000 were in agriculture, 852,770 in industry and crafts (in some cases combined with trade), and 193,530 in wholesale and retail trade proper.

TABLE 1.—*Distribution of Establishments and Employees in Sweden, 1930, by Occupation*

[Data are from *Statistisk Årsbok, 1936*]

Occupation	Number of estab- lish- ments	Employees		
		Total number	Percent of total	Number per es- tab- lish- ment
Agriculture.....	428,600	910,000	39.7	2.1
Fishery.....	9,570	13,740	.6	1.4
Gardening.....	3,910	14,410	.6	3.7
Forestry.....	390	44,400	1.9	113.8
Industry and crafts, not combined with other occupations.....	81,730	727,400	31.8	8.9
Industry and crafts, combined with trade, etc.....	16,360	125,370	5.5	7.7
Other wholesale trade.....	8,860	49,230	2.2	5.6
Other retail trade.....	45,720	144,300	6.3	3.2
Hotels, restaurants, etc.....	8,210	49,960	2.2	8.1
Banking and insurance business.....	4,450	20,520	.9	4.6
Transport and communications.....	16,130	149,130	6.5	9.2
Miscellaneous nonspecified occupations.....	15,510	42,000	1.8	2.7
Total.....	639,440	2,290,460	100.0	-----

Right of Association

The Swedish Constitution (1809) does not mention the right of association. Various events, including legal decisions, show clearly that this right has always been regarded as self-evident. The earliest Swedish workers' associations, although an outgrowth of the older guilds, were merely of the mutual-benefit type. In 1879 a sawmill strike was put down by the military authorities, and, with the inevitability which always seems to follow ruthlessness, trade-unions were formed in the next decade. These were the first labor unions which, in the modern sense, were devoted to protection of the members against employers and to aggressive action to improve the workers' economic and legal position.

In 1902 many of the scattered employers' associations then existing united for mutual assistance and formed the Swedish Employers' Federation, which is still in existence. A cardinal rule of the federation was that in dealing with trade-unions each member thereof reserved the right to employ men belonging to any union or to none. By 1906 various industrial disputes brought about the so-called "December compromise", by which the workers recognized this right of the employers, who in turn recognized the workers' right of association. A clause to this effect has since been included in all agreements made with members of the Swedish Employers' Federation. Very few disputes have arisen over the application of this clause. Only on rare occasions has labor accused employers of invoking the clause in order to employ or discharge workers so as to favor unorganized men to the detriment of trade-union members. In collective agreements between trade-unions and employers who are not members of the federation a clause is frequently included that members of the trade-union will have preference in obtaining work, and in some cases it is provided that only members of the trade-unions will be employed.

Right to Lock Out and to Strike

Neither strikes nor lock-outs are forbidden by law. In 1899 an amendment to the general Penal Code was adopted, the object of which, while not to prevent strikes, was to restrict trade-unions in their attempts to induce unorganized workers to join in strikes. Under this amendment, attempts to force workers to accept, quit, or resume work were liable to conviction for infringement of the Penal Code, with a penalty of up to 2 years' hard labor. In 1914 the maximum penalty was reduced considerably. This had the effect of nullifying the importance of the amendment, with the result that such cases were dealt with under the general Penal Code covering maltreatment and threats. Prosecutions seldom occur under this law, although pickets are occasionally fined for disturbing the peace.

The most serious industrial struggle which Sweden has known was the general strike of 1909 which followed the severe industrial depression of 1908. Although the general strike failed, the economic revival of 1910 set both employers and trade-unions on their feet again and the growth of their organizations continued at a rapid pace during the war. (See table 2.) Meanwhile the search for means to prevent or minimize industrial disputes began.

Conciliation Measures

In 1906, the year of the "December compromise", the first act was passed providing for mediation in labor disputes. The basic idea of the 1906 law was simply for the Government to place a conciliation institution at the disposal of the parties, giving them an opportunity of meeting together with an unprejudiced and competent mediator who had no compulsory powers. This conciliation or mediation institution was based to some extent on previous voluntary arrangements, since a practical procedure had developed between workers' and employers' organizations for the making of collective agreements and for settling disputes by jointly calling in outsiders (chiefly officials) to mediate.

The result of the 1906 law was a rapid expansion in collective agreements, and once again principles and practices were evolved which preceded legal authority. In 1929 two laws confirmed these principles and practices. Before discussing these in detail, the main facts concerning the existing associations of labor and capital will be noted.

Trade-Unions

Between 70 and 80 percent of the industrial workers of Sweden are organized. Table 2 shows, for selected years, the growth of the unions since 1900; it includes not only industrial workers but also all others, such as seamen, foresters, and agricultural laborers.

TABLE 2.—*Development of Trade-Unions in Sweden, 1900 to 1936*

End of year—	Swedish Confederation of Trade-Unions		Swedish Workers' Central Organiza- tion (Syn- dicalists) (S. A. C.)— number of members	End of year—	Swedish Confederation of Trade-Unions		Swedish Workers' Central Organiza- tion (Syn- dicalists) (S. A. C.)— number of members
	Number of unions	Number of members			Number of unions	Number of members	
1900.....	22	44,145	.....	1920.....	31	280,029	32,259
1907.....	28	186,226	.....	1925.....	34	384,617	37,205
1908.....	27	160,776	.....	1930.....	37	553,456	28,150
1909.....	28	108,079	.....	1935.....	42	701,186	35,494
1910.....	27	85,176	696	1936.....	41	757,376	133,163
1915.....	27	110,708	4,880				

¹ On Sept. 30.

Industrial unions in Sweden considerably outnumber craft unions in membership. There is also the cartel system, or an organization of craft unions in the form of an industrial association. The original craft unions, which grew out of the medieval guilds, opposed the tendency in the first decade of this century for labor to organize in industrial unions. The fact must not be overlooked that Sweden was then scarcely beyond the stage when agriculture predominated over industry. In 1908 six unions—those with over 10,000 members—comprised 60 percent of the total membership. A committee appointed to plan the reorganization of labor along industrial lines completed its work in 1912 and its plan was adopted. Since that time organization on an industry basis has grown much faster than that on the craft basis, but reliable statistics are not available.

Cartels have not played a large part in the trade-union movement. The independence of the respective trade federations remains untouched, and cooperation within the cartels has not always worked smoothly.

Legal Status of Trade-Unions

The greater part of trade-union activity is free from regulation. There is no obligation to register, to account for funds, to submit to Government supervision of elections or of strike votes, etc., or to co-operate with the State in any way. The law of September 11, 1936, effective January 1, 1937, established for the first time by law the right of trade associations to exist and to negotiate. Government and municipal employees who have official responsibility are excluded. The right to negotiate, as defined, includes the right to call upon the opposite party to enter into negotiations. Refusals are considered under the laws governing mediation and labor courts. This does not imply compulsory arbitration in any sense, beyond the necessity for accepting the Government's invitations to a round-table discussion.

This law was not a parliamentary response to any demands from industrial workers or labor organizations, who were satisfied with their de facto rights, which had long since been recognized. The object of the law was to guarantee the right of organization and negotiation to office clerks and other "white-collar" personnel.

The law (sec. 3) provides for a very interesting procedure. A labor association with over 300 members may register with the Social Board its willingness to forego the right to call its members out on strike. The employer is then automatically forced to renounce the right of lock-out, and, presumably, negotiations are forced. In effect, this provides considerable delay before strikes or lock-outs can legally take place, since, if any dispute arises between the parties, either may request the services of a negotiator. The latter, if the point is still not settled, may in turn request the appointment of a board of three arbitrators, to whom the case is to be presented in the absence of the

parties (who are thus likely to submit all their arguments at once). The arbitration board may publish its findings, if the terms are not acceptable, so as to bring public opinion to bear thereon. Thereafter the so-called peace engagement, as far as the discussed question is concerned, expires, if within a month one of the parties notifies the opposite party and the Social Board of its intention to use force. During the subsequent dispute the appointee of the Social Board may invite the parties to renewed discussions as opportunity arises. The only compulsion is to meet, not to arbitrate nor to forego the use of fighting measures.

Employers' Associations

The closer organization of labor in the late 1890's led to attempts to unite the scattered associations of employers despite their differing political opinions. The failure of the general strike of 1902 in support of a demand for universal suffrage, at a time when less than 10 percent of the population possessed the vote, was soon followed by the formation of the Swedish Employers' Federation (*Svenska Arbegsgifvareforeningen*) and two other federations which some 15 years later merged with it. The federation consolidated its gains after its victory in the general strike of 1909, and grew rapidly in membership and strength. It attracted chiefly large-scale industries, and organizations such as those of painters, tinsmiths, tailors, and master bakers withdrew. Others, such as those in the transport industries, agriculture, and the press, formed independent organizations. These cooperate with the Employers' Federation. The State enterprises are not members, although the wine and spirit monopoly is. A group of Swedish municipalities has formed a separate negotiation organization.

About 10,000 employers, employing nearly 450,000 workers, belong to various employers' federations. The most important of these, with the approximate number of employees on January 1, 1937, were as follows:

	Number of employees
Swedish Employers' Federation-----	320,000
Swedish Railways Employers' Federation (excludes State railways)-----	20,000
Swedish Ship Owners' Federation-----	12,000
Agricultural Employers' Federation-----	20,000

The main characteristic of the Swedish Employers' Association is its strong centralization. Fees and representatives are apportioned according to the number of employees. Voting is determined by the amount of fees. The representatives form a general meeting and a general committee, and the latter appoints an executive board, the authority directly responsible for current business and for approving lock-outs. The members bind themselves to maintain a uniform method of dealing with labor. Collective agreements cannot be concluded or lock-outs declared without the board's approval. Members

who have provoked strikes unwarrantably are denied compensation, and may even be fined. When a large lock-out is planned and any association or member refuses to join, a two-thirds majority rules. A result of this strong centralization is that collective agreements most frequently take the form of national agreements, and are often synchronized in order to regulate conditions simultaneously in as many industries as possible.

Mediation Legislation

The current law governing mediation in labor disputes is a revision of the law of 1906 and was passed in 1920. Amendments to it were made in 1931, 1935, and 1936.

Under this law the Social Board of the Ministry of the Interior has set up a special secretariat, the Mediation Office, where information is compiled, and has appointed mediators for each of the seven districts into which the country is divided for this purpose. The law provides for overlapping of districts and disputes.

The mediators are impartial experts, and their duty is to place their knowledge and good offices at the disposal of trade associations who are negotiating, or who have come into conflict. Except as noted below, there is no compulsion; either party may refuse to attend a meeting called by the mediator or may disregard his advice without penalty. The mediator may not prohibit strikes, lock-outs, or other measures of force. In short, the law implies a belief in the possibilities of abstract human virtues if provided an opportunity to be asserted. Mediators, it is supposed, will succeed insofar as their personality, impartiality, knowledge, and good judgment influence the contestants and also public opinion. It is also implied that disputants will appear whose grievances are sincere and whose spokesmen are public-spirited. Since there is no compulsion whatever, and since the system has been extensively used, it may safely be assumed that the theory of the law has proved to be practicable.

Extent of Labor Disputes

The extent of the problem is indicated by the figures in table 3, which show the average yearly number of working days lost from 1921 to 1935 because of labor conflicts:

TABLE 3.—*Average Yearly Number of Working Days Lost Because of Labor Conflicts, 1921 to 1935*

Type of dispute	Average number per year	Workers affected	Working days lost
Strike.....	193	26,485	1,473,900
Lock-out.....	9	14,454	388,900
Mixed.....	11	7,001	493,700
Total.....	213	47,940	2,356,500

In earlier years 1909 stood out as a bad year for labor conflicts, as over 300,000 workers were involved and nearly 12,000,000 days lost. Another bad year was 1920, with nearly 9,000,000 days lost. It is estimated that during the years for which official statistics have been kept—1903 to 1935 (later data not yet being available)—approximately 70,000,000 working days were lost through suspension of work. Between 75 and 85 percent of the disputes concerned wages.

In table 4 are shown the activities of the mediators during the years 1921 to 1935.

TABLE 4.—*Activities of Mediators in Labor Disputes in Sweden, 1921 to 1935*

Type of activity	Average negotiations per year	Number of workers affected
Disputes without strikes or lock-outs.....	102	91,355
Disputes with strikes or lock-outs.....	82	41,488
Total.....	184	132,843

Amendments to 1920 Mediation Law

Under the 1920 law the duty of the mediator is to invite the parties in a dispute to a conference, if after investigation he feels that his intervention might be useful. In 1931 an addition to the law was made whereby he must intervene if requested by the employers or by at least half of the workers affected. Presumably, this was to secure legal recognition of the right to negotiate.

The laws of 1928, effective in 1929, concerning collective agreements and the labor court, did not change the law concerning mediation. The effect, however, was to cause the chief work of the mediators since then to center around conflicts in connection with new or renewed collective agreements.

By an act of July 8, 1935, a regulation was included in the mediation law regarding notification of strike or lock-out at least 7 days in advance to the mediator and to the opposite party, stating the reasons for the proposed strike or lock-out.

The law of September 11, 1936, effective from January 1, 1937, provides that the mediation law shall not apply to employers and workers who are subject to the section (see p. 59) which provides for a form of truce called a peace engagement, whereby a union by foregoing the right to strike can force an employer to forego the lock-out and to meet the union's representatives. If negotiations fail, a mediator may be called, and if he fails, a board of three arbitrators may be called. Another section of this law provides that the mediator can, at the request of one party, report the other party's failure to attend a conference arranged by him to the Labor Court, which can punish nonattendance with fines (or if there are no assets, with prison sen-

tences). It must again emphatically be pointed out that this coercion to meet cannot be called compulsory arbitration; the parties are still free to accept or decline the proposals of mediators or arbitrators after the meeting has taken place.

Legislation Dealing with Collective Agreements

As previously stated, owing to the Swedish legislative habit of ratifying existing institutions after they have been successfully functioning by themselves, rather than to create institutions on paper in the hope that they will work, it is necessary to consider the several laws in order to study the system as a whole. To recapitulate, the important laws are those of 1906 and 1920 on mediation, 1929 on collective bargaining and labor courts, and 1937 on the right of association and negotiation (the dates are of the year during which the laws first became effective). Each seems to anticipate the next and each modifies the last. Only by keeping all these laws under observation at once, and noting their responsiveness each to the other and to actual conditions, can the main principles which govern them all be seen.

Collective agreements had been made for several decades, and the principle had received recognition by decisions of the Supreme Court, which accepted jurisdiction. Strikes and lock-outs have seldom been the outcome of disputes over the terms of collective agreements.

In 1910 and 1911, bills to legalize such agreements and institute a special court failed to pass, due principally to labor-union opposition. In 1929, laws were finally passed by Parliament against the opposition of labor and without the enthusiastic support of capital. One law was intended to determine, modify, and regulate the current practices. The other established a Labor Court to deal with differences of interpretation of collective agreements. The court is the important element in the 1929 legislation.

The collective-agreement law defines such agreements, declares illegal any strikes and lock-outs begun during the validity of an agreement, and in general fixes the legal consequences of collective agreements and the responsibility of the parties for their observance.

In the manufacturing industries, building, and transport trades, terms of employment for about 75 percent of the workers are regulated by collective agreements. In forestry and agriculture only a few collective agreements exist.

The Labor Court

The labor court law of 1929 sets up a court of seven members. The chairman and two members must be impartial members, appointed by the Government, two being legal experts and one an expert in labor questions. The other four are chosen for 2-year terms, two by the employers' and two by the workers' organizations. The court's

jurisdiction is over the validity and meaning of the terms of collective agreements, whether actions taken have been within the terms of the agreement, and the consequences of illegal actions. Decisions are reached after one hearing, if possible. The court may impose fines, but these may not be converted into prison sentences and in practice are small and for moral effect. It is said that judgment in two-thirds of all cases has been rendered by unanimous decision. Over two-thirds of the cases have been brought by labor. The laws of 1929 provide that if one party brings a dispute into court the other must appear and both must comply with its decision. Strikes and lock-outs in the interval are illegal.

Underlying Principles of Swedish Labor Laws

The whole tenor of the Swedish labor laws is to force opposing workers and employers to meet, negotiate, and delay before adopting force; to give publicity in order that the general public may know about and perhaps influence the argument; to give speedy decisions, shorn of legal bickerings, in those cases where agreements have been made and the quarrel is over the terms.

The Government offers its services as fact finder and peacemaker, but, except to insist that the parties meet, makes no demands and enforces no decisions. When parties voluntarily bind themselves, the Government, upon request, will interpret the contract and will declare which party is right.

The laws merely give legal recognition to practices which have already proved workable, because capital and labor have formed strong and nearly balanced organizations. Both the Swedish temperament and profound self-interest make for understanding and respect between opponents and a mutual desire for moderate labor policies.



PERSONNEL PRACTICES IN FACTORY ADMINISTRATION

POLICIES regarding hours of work, attendance, employment, payroll procedure, discharge, and resignation were the subjects of a recent survey by the National Industrial Conference Board. The investigation also included plant privileges accorded to employees, and office rules and regulations. The report on the study gives data from 865 establishments, employing 1,519,587 persons.¹

Some of the findings of the survey with reference to wage earners in factories are presented briefly below.

¹ National Industrial Conference Board, Inc. Study No. 233: Personnel Practices Governing Factory and Office Administration, by F. Beatrice Brower, New York City, 247 Park Ave., 1937.

Hours of work and attendance.—Of 433 establishments, 53.6 percent had a 5-day week. Such a week was reported as relatively much more common in establishments employing large numbers of persons than in those with small working forces. For example, 64.7 percent of the companies employing 5,000 or more wage earners had a 5-day week, as compared with 29.6 percent of those employing 1 to 99 wage earners.

Most of the establishments on a 5-day week had a shorter workday than companies operating over 5 days per week. The most common starting time for plant operation was 8 a. m. and the most common closing times were 4, 4:30, and 5 p. m. In approximately 90 percent of 420 establishments reporting on this subject, the lunch periods ranged from one-half to 1 hour.

Tardiness usually dates from the opening hour, but some companies allow a little leeway. Practice with regard to the amount of pay forfeited for tardiness varies widely. Most companies permit tardy employees to begin work immediately upon arrival. Companies are about evenly divided on the question of making exceptions to tardiness rules because of special circumstances.

About a quarter of the companies covered compensate in some way employees for whom there is no work but who were not notified to remain away.

Employment and pay-roll procedures.—The minimum hiring age for young persons, in the majority of the establishments, was 18 years. Less than 25 percent of the companies reported having a definite maximum hiring age for older workers. Where such restrictions were made, the maximum was ordinarily lower for women than for men.

A percentage distribution of factories reporting maximum hiring ages is given in the following table:

Percentage Distribution of Companies Having Specified Maximum Hiring Ages for Wage Earners

Maximum age of persons accepted for employment	Total companies		Percent of companies, by employees per establishment				
	Number	Percent	1 to 99	100 to 240	250 to 999	1,000 to 4,999	5,000 and over
Males:							
No definite maximum hiring age.....	306	75.6	88.0	76.6	74.1	71.2	87.5
Maximum hiring age.....	99	24.4	12.0	23.4	25.9	28.8	12.5
30 years.....	2	.5	—	1.1	—	1.4	—
35 years.....	1	.2	—	—	.5	—	—
40 years.....	15	3.7	—	4.3	4.6	2.7	—
45 years.....	22	5.4	—	3.2	5.1	9.6	12.5
50 years.....	33	8.1	12.0	8.5	8.1	8.2	—
55 years.....	7	1.7	—	1.1	3.0	—	—
60 years.....	16	4.0	—	4.3	4.6	4.1	—
65 years.....	3	.7	—	1.1	—	2.7	—
Total.....	405	100.0	100.0	100.0	100.0	100.0	100.0
Females:							
No definite maximum hiring age.....	267	78.3	87.5	78.8	80.1	68.8	86.7
Maximum hiring age.....	74	21.7	12.5	21.3	19.9	31.3	13.3
25 years.....	2	.6	—	2.5	—	—	—
30 years.....	12	3.5	6.3	3.8	2.4	6.3	—
35 years.....	6	1.8	—	—	2.4	3.1	—
40 years.....	18	5.3	6.3	6.3	6.6	1.6	—
45 years.....	14	4.1	—	1.3	3.6	7.8	13.3
50 years.....	12	3.5	—	2.5	3.6	6.3	—
55 years.....	2	.6	—	—	1.2	—	—
60 years.....	6	1.8	—	3.8	—	4.7	—
65 years.....	2	.6	—	1.3	—	1.6	—
Total.....	341	100.0	100.0	100.0	100.0	100.0	100.0

A very small minority of companies reported the use of trade and intelligence tests. Wherever similar work is being done by men and women, men were preferred to women. As a general rule, women are allowed to hold their jobs after they marry. Wage earners are usually paid by check, weekly, and on the company's time. About 75 percent of the companies permit their workers to draw on their wages ahead of pay day, but with certain restrictions. Usually a uniform rate is paid for overtime. A great variety in overtime rates was reported, the regular rate of pay being most frequently used.

Absences from work.—Usually wage earners are not paid for excused absences, as for example, National Guard or Reserve Corps duty, jury duty, weddings or funerals in their immediate families, or visits to their own physicians or dentists. Comparatively few establishments have any fixed standards as to the length of time an employee's name will be kept on the pay roll if he is indefinitely incapacitated as a result of accident or illness.

Of 348 companies, 41.4 percent reported that they did not penalize their workers for not reporting absence, but that warning was sometimes given that the offense must not be repeated. On the other hand, in 29.3 percent of the companies, wage earners who failed to make such report were subject to discharge.

Unreported absences are investigated by a large majority of companies within 3 days. If the absence continues with no word from the worker, his name is usually dropped from the pay roll within a period of a month or less. Once off the pay roll, such a wage earner is ordinarily treated as a new employee if he attempts to return to work, and he can enter only through the regular employment channels.

Plant privileges.—Of those companies who reported on the subject, two-thirds allow their labor force to eat during working hours. Because of the danger of fire and fire-insurance regulations, relatively few of the companies reporting allow smoking in or about the working premises and these allow it only under surveillance. Emergency telephone calls are permitted, the establishment making no charge for them. In 45.6 percent of the concerns reporting thereon, no washing up on company time is permitted; in the majority of the establishments granting this privilege, the wash-up periods at noon and at closing time are 5 or 10 minutes. In almost all the factories reporting thereon, no athletics, picnics, or other outings are permitted on company time; 66.6 percent of the concerns reporting thereon give no rest periods; and 71.9 percent make no fatigue studies.

Miscellaneous provisions.—Of 425 companies, 85.6 percent make no contribution to the expenses of tuition of wage earners taking approved education or training courses. Usually the acceptance of remunerative employment outside the establishment's working hours is allowed. Approximately half of the companies operating more than one shift reported rotating shifts, at least in some departments.

Only a small minority of the concerns reported wage garnishment or assignment as a basis for dismissal.

The penalties for reporting for work while under the influence of liquor are as follows:

Penalty:	Percent of companies imposing penalty
None except reprimand	0.9
Lay-off	16.0
Subject to discharge	56.4
Lay-off, discharge if frequent	16.6
Lay-off or discharge	5.2
No definite policy	4.9
Total	100.0

Foremen's meetings are commonly held on company time. Employees pay for overalls, but not for required uniforms when furnished by the department. "A small minority of companies charge wage earners for breakage of tools, while a larger percentage require a wage earner who loses a tool to make some restitution, ranging in amount from a nominal charge to the full replacement value."

Discharge and resignation.—The staff members most frequently authorized to discharge wage earners are the superintendent, the department head or foreman, and the personnel manager. In some of the companies with large labor forces, the decision of the lower official is referred for review to some one of higher rank before final action is taken.

Of 348 companies, 62.4 percent had adopted no permanent rules concerning discharge. The principal causes for dismissal in establishments having such rules are incompetence, insubordination, intoxication, dishonesty, irregular attendance, negligence, and failure to obey rules. Approximately 30 percent of 343 companies give no advance notice of discharge. Of the companies giving such notice the period varies from a half day to 1 month, 48.4 percent giving 1 week and 11.3 percent 2 weeks. The majority of the companies require that notice of leaving be given in advance, in order that the employee may receive pay on the day of resignation. In 33.9 percent of the reporting companies the required period of such advance notice is 1 week.

At the request of a worker leaving under satisfactory circumstances, 83 percent of the concerns will give letters of recommendation, and 99.4 percent will give such letters at the request of other companies.

Productivity of Labor and Industry

LABOR PRODUCTIVITY IN THE LEATHER INDUSTRY¹

By JOHN R. ARNOLD

Summary

THE output per man per hour in pounds or square feet of leather produced advanced approximately 25 to 28 percent between 1923 and 1935, according to a survey just completed by the Bureau of Labor Statistics in cooperation with the Works Progress Administration. About half of this gain was registered after 1933.

This recent increase in the production of leather per man-hour did not begin in 1923, but goes back to about 1915. During the 35 years preceding the World War there had been very little change. The most spectacular gains of all, however, had been recorded from 1860 to 1880, the period of the first great wave of mechanization.

These increases in production per man-hour have not, save for a few years just before the recent depression, resulted in any considerable displacement of workers. Until the turn of the century or a little later this was due to the rapid increase in the production of leather; but since that time it has been mainly the consequence of the reductions in working hours. The shortening of the latter as a result of the N. R. A. code was of special importance. If working hours had been the same in 1935 as in 1923, the number of wage earners would have been reduced—with the actual increase in productivity and the actual decline in the output—by nearly 19,000, instead of by less than 9,000.

Characteristics of Leather Industry

The leather industry is not homogeneous. It is rather, in many respects, a group of some 10 independent subindustries. The Bureau of Labor Statistics survey was planned to cover thoroughly the four most important of these subdivisions—the manufacture of sole leather, side leather, calfskin, and kid leather. Sole leather in the

¹ This is a summary of a study made under the direction of Boris Stern, of the Bureau of Labor Statistics. The complete survey will be published in a separate bulletin, entitled "Labor Productivity in the Leather Industry." It is one of the series undertaken by the Bureau of Labor Statistics in cooperation with the National Research Project of the Works Progress Administration.

strict sense is the material from which shoe soles are made. Parts of sole-leather hides, however, are used for other purposes. Side leather is the trade name for shoe upper leather made of cattle hides. The side-leather branch also produces patent leather and splits. The kid-leather branch produces shoe upper leather exclusively; but the output of the calfskin branch includes a small proportion of fancy stock. In 1935 these four branches together accounted for 96 percent of all leather used in the manufacture of shoes, for 75 percent of the whole output of the industry, and for approximately the same proportion of the total employment.

The number of establishments, the value of the product, the number of wage earners, and the volume of wages of the leather industry as a whole are presented in table 1. The number of establishments has decreased since the middle of the nineteenth century by more than 90 percent, and by nearly 40 percent since 1923. The decline has been most pronounced in the case of the sole- and side-leather branches, and least in the case of the calfskin and kid. The number of large and medium-sized units has decreased much less than the number of small ones. The output per establishment has increased greatly with this change; but the size of the typical producing unit is still small in comparison with that which prevails in many other important industries. Even the relatively large plants have, on an average, fewer than 500 employees each. The increase in average output per establishment has played a considerable part in making practicable the gains that have been registered in production per man-hour.

TABLE 1.—Establishments, Value of Product, Employment, and Pay Roll
in Leather Industry, Census Years 1849 to 1935

[Source: Census of Manufactures]

Year	Number of establish- ments ¹	Value of product (thou- sands)	Num- ber of wage earners	Volume of wages (thou- sands)	Year	Num- ber of establish- ments ¹	Value of product (thou- sands)	Num- ber of wage earners	Volume of wages (thou- sands)
1849.....	6,686	\$43,458	25,595	\$6,542	1919.....	680	\$928,592	72,476	\$88,205
1859.....	5,188	75,609	26,246	8,176	1921.....	608	383,365	48,955	57,741
1859.....	² 4,486	157,238	35,243	14,506	1923.....	597	488,898	59,703	73,784
1879.....	² 3,309	200,265	40,282	16,504	1925.....	531	452,186	52,263	65,834
1889.....	1,787	172,136	42,302	21,250	1927.....	494	494,256	52,924	67,887
1890.....	1,306	204,038	52,109	22,591	1929.....	471	481,340	49,932	63,414
1904.....	1,049	252,621	57,239	27,049	1931.....	418	271,138	42,047	49,542
1909.....	919	327,874	62,202	32,103	1933.....	374	237,202	44,191	43,076
1914.....	741	367,202	55,936	31,914	1935.....	384	306,907	50,877	55,683

¹ Except for 1869 and 1879 the numbers of establishments are the same as in the Census publications, and are subject to the same adjustments to make them completely comparable.

² Number of tanning, patent-leather, and skin-dressing establishments, excluding currying plants. The figure is therefore a minimum, used to avoid

exaggeration of the decline in the number of establishments, since at this census the practice of reckoning every plant which included tanning and finishing operations as an establishment of both the tanning and the currying industries resulted in a considerable though uncertain amount of duplication.

From 1923 to 1929 the value of leather produced ran from 450 to 500 million dollars annually. In 1935, the most normal recent year, the corresponding figure was just over 300 million. The quantity

produced, which can be shown only in the form of an index² because of the varying units which prevail in the different branches, increased rapidly until 1899, and then more slowly until shortly after the war. From 1919 to 1935 there was no material net change. The output of 1935 was about 13 percent below that of 1923; but the latter was abnormally high. The quantity produced in the depression years 1931 and 1933 dropped to the level of 1899.

The demand for leather for the manufacture of shoes, gloves, and garments, which accounts for nearly 90 percent of the total production, might be expected to increase roughly in proportion to the population. Of late years, however, this potential increase has been offset by the competition of substitutes, by the effect of the use of automobiles on the demand for shoe, harness, and upholstery leather, and by the changed styles in women's shoes. The output of side leather and of kid was a little greater in 1935 than in 1923, while in the production of sole leather and of calfskins there had been a relatively heavy falling off. Under these conditions individual tanneries have been able to increase their output only at the expense of their competitors or by absorbing the business of producers who have dropped out of the industry.

The number of tannery wage earners increased rapidly up to 1904. From the latter year until 1923 it remained at about 60,000, though with considerable fluctuations. From 1923 to 1929 the number declined by nearly 18 percent; but since 1929 there has been little net change.

Kid tanneries are urban establishments, but many of those of the side- and calf-leather branches are situated on the outskirts of cities of no great size. Most sole-leather plants are in very small or isolated communities. The typical producing unit is owned by a family or by a small group of partners. The result is that the plant managers, who are very often owners as well, build up close contacts with the labor force.

The amount of work done by hand in tanneries is still considerable. Hardly any of the machines in use can be called automatic, and almost every process involves some manual skill. The stock is easily damaged by unskillful handling, and at some stages it deteriorates rapidly if not pushed with due promptness through the routine of manufacture. A high premium is consequently put on skill and training. It is also important that a sufficient number of workers be immediately available to avoid deterioration of the material in process, when the volume increases. For these reasons owners and managers are reluctant to let experienced men leave their employ, even when their production schedules are on the downgrade. Ninety percent of the workers are adult males, with a relatively high level of intelligence.

² An index of quantity is shown in table 4 (p. 73).

Child labor is practically unknown. The labor turn-over is very low and the average age and term of service high.

The proportion of indirect workers is fairly large—about 13 percent for the four branches together, and 20 percent for the sole-leather branch. This results from the practice of employing substantial repair and maintenance forces and from the amount of labor required for the internal transportation of stock in process.

The process of manufacture requires about a month in side, calf, and kid tanneries, but from 2 to 4 months in most sole-leather plants. Because of this and of the high cost of the raw material, the investment in stock in process is heavy. There is little seasonality in production, but there are pronounced short-time fluctuations of a non-seasonal character. The number of separate operations is large, and the stock must frequently be moved up and down and to and fro. Despite installations of power conveying and handling equipment, the amount of labor used for this purpose is still substantial.

The survey of the Bureau of Labor Statistics covered a total of 55 tanneries, operated by 30 companies, and in 1935 accounted for about 54 percent of the total production of the four branches and for 48 percent of the employment.

For a limited number of important establishments intensive studies were made; that is, data for employment, man-hours, and production were obtained for every year from 1936 back to 1923, when the available records permitted, both for the whole plant and for all its departments. For the remaining establishments summary studies only were undertaken. In such cases figures were obtained for the whole of each plant, but not for the departments, for the years 1934–36; and these have been combined with the 1923 and 1931 data for the same establishments, which were gathered for the purposes of a previous survey of labor productivity in the leather industry made by the Bureau in 1932.

In this summary the tables drawn from the survey material are for the intensive studies only. The latter, however, show about the same production per man-hour as the whole sample (including the summary studies) and the same trend since 1923.

Output per man per hour in the sole-leather branch has been computed in pounds per man-hour, and that of the side-, calf-, and kid-leather branches in square feet. The labor productivity of the four branches together can be shown only in the form of index numbers, representing weighted averages of the rates for the four individually.

The man-hour production of the tanneries included in the survey sample runs higher than that of the same branches at large, due mainly to the fact that the desired information could be obtained only for large or medium-sized and relatively efficient establishments. The extent of the difference between the productivity of the branches as

a whole and that of the samples in 1935 is shown by table 2. In the case of the kid-leather branch, which is the most homogeneous of the four, the differences are slight.

TABLE 2.—Output per Man-Hour in Branches of Leather Industry Covered by Survey, 1935

Branch of industry	Unit of output	Whole branch ¹	Survey sample	
			All studies	Intensive studies
Sole leather	Pound	16.34	19.30	20.70
Side leather	Sq. ft.	* 22.20	* 26.40	* 28.94
Calf leather	do	11.71	13.54	13.86
Kid leather	do	11.55	11.56	10.87

¹ These rates were derived from samples of production and man-hour data much larger than those of the survey itself but available only for 1935.

¹ The production data from which these rates are computed include rough patent sides and splits. The total production of splits is estimated.

Table 3 shows, in the form of index numbers, the change that has taken place since 1923 in the labor productivity of each of the four branches covered by the survey and of all four taken together. With these, for purposes of comparison, there appears a computed index of the productivity of the industry as a whole. The latter indicates a gain from 1923 to 1935 of a little more than 28 percent, while the increase shown by the survey sample is 25 percent.

TABLE 3.—Indexes of Production per Man-Hour of Tanneries Covered by Intensive Studies, by Branch of Industry, and for Industry as a Whole, 1923–36

[1935=100]

Year	Industry as a whole	1936 survey: Indexes of production per man-hour				
		Four branches ¹	Sole	Side	Calf	Kid
1923	78	80	76	(*)	(*)	81
1924	82	81	78	83	(*)	88
1925	75	83	74	89	(*)	92
1926	78	80	71	84	78	88
1927	81	85	79	85	87	91
1928	84	84	80	81	88	94
1929	79	86	85	82	86	94
1930	84	91	87	85	93	106
1931	84	92	87	93	88	102
1932	92	90	88	85	98	93
1933	88	94	92	93	95	99
1934	98	97	95	96	100	98
1935	100	100	100	100	100	100
1936	96	97	* 104	* 91	* 91	* 103

¹ Weighted averages of the 4 columns following. The weights used were based on the approximate average number of square feet per side or skin of each class. They are: Sole leather, 17½; side leather, 17½; calf leather, 10; kid leather, 5.

² Not available. Taken as 85 in computing the weighted average.

³ Not available. Taken as 78 in computing the weighted average.

⁴ Based on data for 9 months in the case of kid leather and 6 months in the cases of sole, side, and calf leather.

In table 4 the labor-productivity index for the whole industry is shown for all the years of the Census of Manufactures. With it appear the indexes of employment, of average hours per week, of

total man-hours and of quantity produced, from which the index of production per man-hour itself was derived.³

From before the Civil War until 1905 or 1910 the scheduled work week was 60 hours. Then came reductions which, by 1920, had brought the average down to a little more than 48 hours. This remained unchanged until 1933, when the N. R. A. code prescribed a maximum week of 40 hours. After the code was suspended this restriction was continued in force by an informal agreement, which was maintained until very recently.⁴

TABLE 4.—*Long-Time Index of Production per Man-Hour in Leather Industry,
for Census Years, 1849–1935¹*

[1935=100]

Year	Index numbers of—				
	Employ- ment	Average hours per week	Total man- hours	Quantity produced	Production per man-hour
1849	50	166	83	21	25
1859	52	151	79	20	26
1869	69	151	104	37	35
1879	79	151	119	62	52
1889	83	151	125	70	55
1899	102	151	154	82	53
1904	113	151	171	89	52
1909	122	144	176	96	54
1914	110	131	144	89	62
1919	142	127	180	102	56
1921	96	122	117	89	76
1923	117	125	146	114	78
1925	103	125	129	96	75
1927	104	120	125	101	81
1929	98	125	123	97	79
1931	83	119	99	82	84
1933	87	110	96	84	88
1935	100	100	100	100	100

¹ Sources: Index of employment, from Census of Manufactures and Bureau of Labor Statistics; index of average hours per week, computed from data in publications of the Bureau of the Census and the Bureau of Foreign and Domestic Commerce.

Table 5 shows the actual total employment, man-hours and production, and the productivity of labor in pounds or square feet per man-hour, of the establishments for which intensive studies were made in each of the four branches covered by the survey. The increase in productivity shown by the side-leather sample is smaller than that for the other three branches, which do not differ much from one another. The difference is due largely to the fact that side leather as a class is today a higher-grade and more carefully finished product than it was

³ The index of production per man-hour was derived by multiplying the index of employment by the index of average hours per week and dividing the resulting index of total man-hours into the index of quantity produced.

⁴ In the latter part of 1936 and the early months of 1937 there were signs that the N. R. A. code restrictions on hours of labor were ceasing to be maintained. If this continues there is danger of a considerable displacement of workers as a delayed result of past gains in productivity.

15 years ago. No comparable general change has affected the output of sole, calf, or kid leather.

TABLE 5.—*Production per Man-Hour in Leather Tanneries,
by Branch of Industry*

[Group summary for identical establishments]

Year	Sole-leather branch				Year	Calfskin branch			
	Number of em- ployees.	Man- hours (thou- sands)	Produc- tion (thou- sands)	Produc- tion per man- hour		Number of em- ployees	Man- hours (thou- sands)	Produc- tion (thou- sands)	Produc- tion per man- hour
1923 ¹	2,388	5,579	87,408	15.67	1923				Sq. ft.
1924	2,419	5,606	90,138	16.08	1924				Sq. ft.
1925	2,364	5,590	85,814	15.35	1925				
1926	2,357	5,455	80,414	14.74	1926 ¹	960	2,324	27,376	11.78
1927	2,366	5,680	92,928	16.36	1927	1,093	2,747	36,117	13.15
1928	2,407	5,980	99,633	16.66	1928	1,065	2,527	33,807	13.38
1929	2,386	5,794	101,479	17.51	1929	1,227	2,908	37,901	13.03
1930	2,445	5,797	104,695	18.06	1930	1,233	2,984	42,037	14.09
1931	2,292	5,016	90,273	18.00	1931	1,232	2,939	39,329	13.38
1932	2,309	4,500	82,415	18.31	1932	1,225	2,687	39,770	14.80
1933	2,420	4,843	91,777	18.95	1933	1,349	2,948	42,183	14.31
1934	2,685	5,606	110,134	19.65	1934	1,418	2,474	37,454	15.14
1935	2,984	6,141	127,109	20.70	1935	1,414	2,814	42,620	15.15
1936 ²	3,030	3,193	68,711	21.52	1936 ²	1,504	1,565	21,696	13.86
Side-leather branch ³									Kid-leather branch
			Sq. ft.	Sq. ft.					Sq. ft.
1923					1923	2,539	6,463	57,173	8.85
1924 ¹	3,322	7,349	175,635	23.90	1924 ⁴	1,989	5,339	51,042	9.56
1925 ¹	3,381	7,572	195,801	25.81	1925 ⁴	2,404	6,040	60,340	9.99
1926 ⁴	3,649	8,194	199,103	24.30	1926	2,902	7,414	70,960	9.57
1927 ¹	3,745	8,021	197,557	24.63	1927	2,736	6,741	66,819	9.91
1928	3,610	7,829	184,181	23.53	1928	2,692	6,572	66,892	10.18
1929	3,421	7,859	186,164	23.60	1929	3,017	7,560	77,255	10.22
1930	3,322	7,063	174,404	24.69	1930	2,682	6,560	75,414	11.50
1931	3,336	7,415	200,055	26.98	1931	2,470	5,829	64,766	11.11
1932	3,386	7,525	185,706	24.68	1932	2,644	5,657	57,385	10.14
1933	4,067 ⁵	8,733	235,975	27.02	1933	2,906	6,085	65,570	10.78
1934	3,943	7,740	215,446	27.84	1934	2,967	5,472	58,420	10.68
1935	3,881	6,878	199,075	28.94	1935	2,989	5,743	62,439	10.87
1936 ²	4,094	3,830	100,581	26.26	1936 ²	2,750	4,139	46,356	11.20

¹ Partly estimated, owing to absence of data for 1 tannery.

² January-June.

³ All types of side leather, including rough patent and splits.

⁴ Partly estimated, owing to absence of data for 2 tanneries.

⁵ January-September.

In the case of this industry the introduction of new processing machines may be disregarded almost entirely as a cause of increased labor productivity since 1923. A few new machines have been introduced, and here and there they have cut down labor required in single departments. But such savings, as a rule, have either been offset by changes designed to improve the quality of the product and requiring more labor time, or were not large enough to influence appreciably the output per man-hour of the plant as a whole.

The most important of the processing machines now in use originated in substantially their present form more than 50 years ago, though they took a long time to replace the older hand processes completely. Dur-

ing the past 20 years the chief motive for the adoption of the few new processing machines that have appeared has been to improve the quality of the product; and some of them have involved the expenditure of more labor rather than of less.

The installations of power conveying and handling equipment which most affected the production of leather per man-hour were also made before 1923, and their effects, therefore, do not show up in the survey material. Revisions of plant lay-outs appear as an important cause of increased productivity in a very few cases only. Changes in processes have not affected a large enough part of the labor force of any establishment to be reckoned an important factor.

These statements tend, by a process of elimination, to suggest that the really effective causes of the changes in output per man-hour in recent years have been the improvement of the organization and management of labor, the elasticity of the production combined with the need of maintaining a relatively fixed number of workers, and the concentration of the output in a smaller number of plants. There is abundant nonstatistical evidence, moreover, to support this conclusion.

The tendency of leather production to fluctuate sharply over short periods is due chiefly to the purchase of the raw material on sensitive and speculative markets. The relative inelasticity of the man-hours worked is due to the premium put on experience and availability on the part of the labor force by the characteristics of the stock in process. Owners and managers will not run the risk of losing trained employees, which would result from efforts to keep man-hours in anything like close correlation with the output.

Moderate fluctuations in a tannery's production over short periods are likely to be accompanied by increases or decreases in productivity without intentional changes in the handling of labor; and in such cases it may be correct to state that the variations in the former are the cause of the gains or losses in the latter. The immediate cause of substantial increases in production per man-hour over the whole or the greater part of the years since 1923, however (since they cannot be explained in most cases by changes in equipment, lay-out, or processes), has been the deliberate improvement of organization and management. An accompanying increase in production in such a case has merely facilitated the raising of output per man-hour, by making it possible to accomplish the purpose without breaking up the trained labor force.

In the case of almost all the kid-leather and calfskin tanneries covered by the survey, there has been an association of this kind between the movement of output per man-hour since 1923 and the volume of production. Every substantial gain in the former has accompanied an expansion in the latter. Where the output has not

increased, the production per man-hour has never risen materially, though it has not always declined.

The sole- and side-leather branches, on the other hand, show many instances of substantial increase in productivity in the face of declines in production. They also show cases in which gains in productivity that might have been expected to accompany increases in output have been offset by changes in processes or equipment, made with the object of improving the quality of the product or its suitability for some particular markets.

The concentration of the production of leather in a smaller number of plants since 1923 may be reckoned as a contributing cause of the increase in labor productivity. Such concentration has made it possible for individual tanneries to expand their production without taking business away from still active competitors; and has thereby increased the opportunity to raise productivity without breaking up an existing labor force.

The productivity of tannery labor has been influenced so much by the judgment of owners and managers, and by other intangible factors, as to make it hard to envisage the changes that should be looked for in the future. Cases in which gains in productivity are facilitated by increases in production are not likely to be so numerous as they have been during the past 15 years. The experience of the sole- and side-leather branches, however, has shown that the level of productivity may be raised even in the face of a decline in output. Incidentally, moreover, the field work of the survey brought to light so much evidence of continued time wasting, lost motion, and adherence to traditional tasks and rates of output, as to suggest that the chance for increasing productivity through improvements in management is still far from negligible.

Apart from the causes discussed above, account must always be taken of the possibility that the labor productivity of a tannery or of a branch of the industry has been affected by a shift in the products manufactured. A company does not often change outright from one major branch to another. There are frequent shifts, however, in the proportions of staple and specialty leathers produced by kid-leather and calfskin tanneries, and in the percentage of patent stock turned out by side-leather plants. The problem of disposing of the offal⁵ produced in sole-leather tanneries and of the splits which are taken off in the process of manufacturing side-leather, leads, moreover, to frequent changes in the mode of finishing these byproducts, with a consequent effect on the production per man-hour. In the side-leather branch as a whole the expenditure of additional labor to turn out a

⁵ The parts of a hide unsuited for finishing as sole leather in the strict sense.

more highly finished article has, since 1923, offset part of the gain in the efficiency of labor.

Where practicable, data were obtained for the amount of wages paid in the establishments covered by the survey. These, with some adjustments, have been used to compute the indexes of labor cost per pound or square foot which appear in table 6.

As a result of higher labor productivity in the sole-, calf-, and kid-leather branches of the industry in 1936 as compared with 1923, labor costs declined, but not in proportion to the increased productivity. This is due to the higher wage rates which have been established, largely as incentives for greater productivity. Part of the gains resulting from higher labor productivity thus went to labor and the remainder to the employers. No data are available to determine to what extent the consumer derived any benefit from this change.

TABLE 6.—*Indexes of Labor Cost¹ of the Classes of Leather Covered by the Survey, 1923-36*

[1935=100]

Year	Four branches ²	Class of leather			
		Sole	Side	Calf	Kid
1923	116	121	(*)	(*)	113
1924	113	119	110	(*)	102
1925	110	124	102	(*)	96
1926	117	133	106	119	107
1927	109	119	105	107	102
1928	107	113	106	108	97
1929	107	111	107	114	97
1930	100	105	104	107	82
1931	100	110	98	104	86
1932	93	93	103	85	85
1933	88	92	88	90	82
1934	102	102	100	103	103
1935	100	100	100	100	100
1936 ³	103	96	110	109	100

¹ In cents per pound or square foot.

² Weighted averages of the 4 columns following. The weights used are means of 2 series, based, respectively, on the value of the production and on the volume of employment of the various classes. They are: Sole leather, 32; side leather, 32; calf leather, 15; kid leather, 21.

³ Not available. Taken as 110 in computing the weighted average.

⁴ Not available. Taken as 119 in computing the weighted average.

⁵ Based on data for 9 months in the case of kid leather and for 6 months in the cases of sole, side, and calf leather.

In the side-leather branch the situation has been complicated by the expenditure of additional labor to turn out a more highly finished product. This has offset part of the gain in labor productivity resulting from improved management, and has correspondingly reduced the gross saving in wages. The latter, therefore, has been wholly absorbed by the higher rates paid to stimulate productivity, and no net saving in labor cost appears. Manufacturers of side leather, however, have presumably received an equivalent in the form of better prices for their product.

PRODUCTIVITY, HOURS, AND COMPENSATION OF RAILROAD LABOR, 1933 TO 1936

By WITT BOWDEN, *of the U. S. Bureau of Labor Statistics*

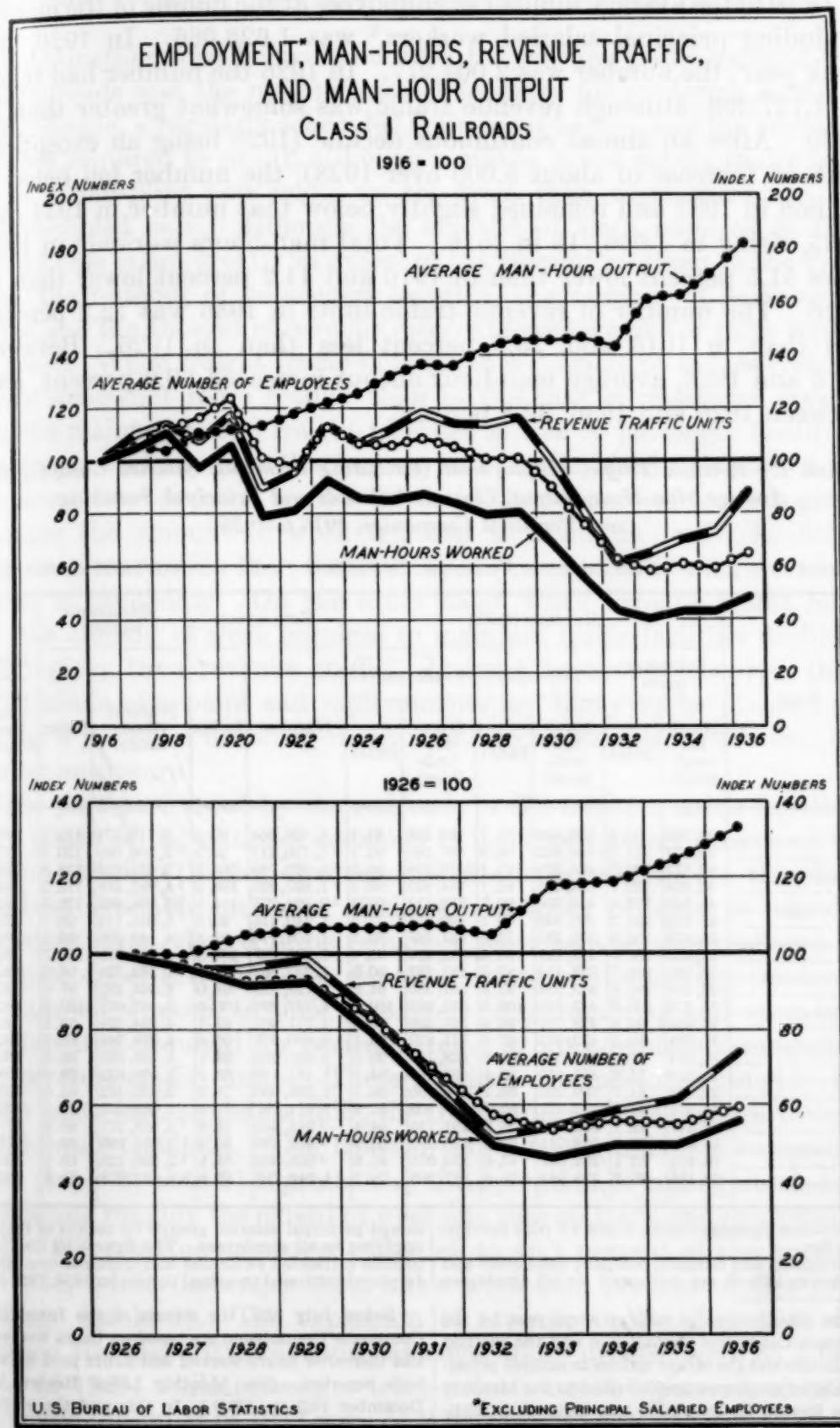
AN OUTSTANDING fact about railroad transportation in recent years has been the continued increase in the productivity of labor. Productivity in terms of average output per man-hour worked in 1936 was 32.8 percent greater than in 1926, and 80.9 percent greater than in 1916. The ultimate product of railroad labor in terms of services rendered to patrons of the railroads is measured in revenue traffic units. These are a weighted combination of revenue ton-miles (tons of revenue freight times miles per ton) and revenue passenger-miles (number of passengers times miles per passenger). Facilities for carrying passengers and freight must be maintained even when the amount of revenue traffic is small. The amount of revenue traffic in 1936 was 25.9 percent less than in 1926 and 12.2 percent less than in 1916. The large increase in labor productivity as measured by the amount of revenue traffic per man-hour is therefore a particularly significant indication, although not an exact measure, of the extent and importance of technological changes in recent years.

In former articles in the *Monthly Labor Review*,¹ the principal changes in the productivity, hours, and compensation of railroad labor were analyzed for the years 1916 to 1932, with supplementary data for January to July 1933. In respect to some of the principal items covered in the earlier articles, the changes from 1916 to 1936 are now presented in summary form (table 1 and accompanying chart).

The amount of traffic handled by the railroads was adversely affected by the general decline of business and by the development of competing modes of transportation. Passenger traffic suffered most severely. The high point of passenger traffic was reached in 1920, with almost 47,000,000,000 revenue passenger-miles. The number in 1926 was 35,478,000,000. In 1932, passenger traffic was less than one-half (47.8 percent) of the 1926 volume, and in 1936 only 63.2 percent of the 1926 volume. Freight traffic, which is a much more significant measure of the amount of business handled by the railroads, declined somewhat less seriously between 1926 and 1932 and made a larger gain between 1932 and 1936. The number of revenue ton-miles in 1932 was, however, only little more than one-half (52.7 percent) of the number in 1926, and in 1936 was 76.4 percent of 1926. The combined volume of passenger and freight business in terms of revenue-traffic units² conforms much more closely to revenue ton-miles than to revenue passenger-miles.

¹ Productivity, Hours, and Compensation of Railroad Labor, in *Monthly Labor Review*, December 1933 (pp. 1275-1289), January 1934 (pp. 43-63), and February 1934 (pp. 269-288). (Reprinted as serial No. R-75).

² Revenue passenger-miles times 2.6 plus revenue ton-miles. For a discussion of the weighting of revenue passenger-miles, see *Monthly Labor Review* for December 1933 (p. 1279).



In 1916 the average number of employees at the middle of the month, excluding principal salaried workers,³ was 1,626,066. In 1920, the peak year, the number was 2,004,277. In 1926 the number had fallen to 1,757,298, although revenue traffic was somewhat greater than in 1920. After an almost continuous decline (1929 being an exception, with an increase of about 5,000 over 1928), the number fell below a million in 1933 and remained slightly below that number in 1934 and 1935, rising to 1,046,718 in 1936. Total man-hours worked⁴ in 1936 were 51.5 percent lower than in 1916 and 44.2 percent lower than in 1926. The number of revenue-traffic units in 1936 was 12.2 percent less than in 1916 and 25.9 percent less than in 1926. Between 1916 and 1936, average man-hour output increased 80.9 percent, and between 1926 and 1936, 32.8 percent.

TABLE 1.—Revenue Traffic, Employment (Excluding Principal Salaried Groups), and Average Man-Hour Output, Class I Railroads and Principal Switching and Terminal Companies, 1916 to 1936

[Derived from reports to the Interstate Commerce Commission. Index numbers based on 1926=100]

Year	Revenue traffic						Employees		Man-hours worked		Index of average man-hour output	
	Passenger-miles		Ton-miles		Traffic units ¹		Number	Index	Number (thousands)	Index		
	Number (millions)	Index	Number (millions)	Index	Number (millions)	Index						
1916	34,586	97.5	326,444	81.7	452,368	84.4	1,626,066	92.5	5,119,374	115.1	73.4	
1917	39,477	111.3	394,465	88.9	497,105	92.7	1,710,117	97.3	5,360,069	120.5	77.0	
1918	42,677	120.3	405,379	91.4	516,338	96.3	1,823,748	103.8	5,639,015	126.8	76.0	
1919	46,358	130.7	364,293	82.1	484,825	90.5	1,897,925	108.0	4,991,316	112.2	80.6	
1920	46,849	132.0	410,306	92.5	532,113	99.3	2,004,277	114.1	5,396,462	121.3	81.8	
1921	37,318	105.2	306,840	69.1	403,853	75.3	1,640,414	93.3	4,035,113	90.7	83.1	
1922	35,470	100.0	339,285	76.5	431,507	80.5	1,604,176	91.3	4,140,296	93.1	80.5	
1923	37,957	107.0	412,727	93.0	511,414	95.4	1,835,127	104.3	4,745,819	106.7	89.4	
1924	36,091	101.7	388,415	87.5	482,252	90.0	1,732,262	98.5	4,359,524	98.0	91.8	
1925	35,950	101.3	413,814	93.3	507,285	94.6	1,722,713	98.0	4,343,282	97.6	96.9	
1926	35,478	100.0	443,746	100.0	535,988	100.0	1,757,298	100.0	4,447,075	100.0	100.0	
1927	33,650	94.8	428,737	96.6	516,226	96.3	1,711,901	97.4	4,294,224	96.5	99.8	
1928	31,601	89.1	432,915	97.6	515,079	96.1	1,630,925	92.8	4,078,346	91.7	104.8	
1929	31,074	87.6	447,322	100.8	528,114	98.5	1,635,969	93.1	4,108,689	92.4	106.7	
1930	26,815	75.6	383,450	86.4	453,168	84.5	1,461,140	83.2	3,526,833	79.3	106.7	
1931	21,894	61.7	306,225	69.7	366,150	68.3	1,233,990	70.2	2,829,162	63.6	107.4	
1932	16,971	47.8	233,977	52.7	278,102	51.9	1,011,797	57.6	2,201,233	49.5	104.8	
1933	16,341	46.1	249,223	56.2	291,710	54.4	945,665	53.8	2,053,277	46.2	117.9	
1934	18,033	50.8	268,711	60.6	315,597	58.9	983,396	56.0	2,201,398	49.5	118.9	
1935	18,476	52.1	282,037	63.6	330,075	61.6	968,900	55.1	2,200,125	49.5	124.5	
1936	22,416	63.2	338,984	76.4	397,266	74.1	1,046,718	59.6	2,482,278	55.8	132.8	

¹ Revenue passenger-miles times 2.6 plus revenue ton-miles.

² Switching and terminal company employees and man-hours 1933-36 are estimated for all employees

except principal salaried groups by means of ratios applying to all employees. The figures for 1917-20 include estimated switching and terminal company employment based on actual figures for 1916, 1921-32.

³ The classification of railway employees by the Interstate Commerce Commission and the method used in this and the earlier articles to exclude principal salaried employees are described in the *Monthly Labor Review* for December 1933 (p. 1284). In addition to changes there mentioned in the Interstate Commerce Commission's classification, a further revision of the classification was introduced in January 1933. In the interest of comparability over the period covered, some salaried employees are included.

⁴ Before July 1921, the reports of the Interstate Commerce Commission are based on hours worked, and thereafter hours worked and hours paid for are both reported. (See *Monthly Labor Review* for December 1933 (p. 1284).) In this and the earlier articles, hours worked are used in tables which go back of 1922 and hours paid for are used when comparability with earlier figures of hours worked is not required.

Revenue Traffic Versus Maintenance of Facilities for Traffic

A distinction must be made between the revenue traffic handled by the railroads and the maintenance of facilities for rendering service. For example, a regularly scheduled train must be run, and the amount of work required to run it, although variable, is not substantially less when 5 half-filled cars make up the train than when there are 10 well-occupied cars. Although the amount of work required in the second case is not greatly in excess of the amount required in the first case, the number of passengers handled, the number of passenger-miles, and the amount of revenue received may be twice or three times as great. When freight traffic falls off, it is possible to reduce freight crews somewhat more readily than in the case of passenger crews, but the maintenance of freight facilities as well as passenger facilities requires a working force that cannot be varied in size in proportion to the amount of revenue traffic. Even in the absence of technological changes the amount of work required to maintain traffic facilities increases less rapidly than the amount of revenue traffic when revenue traffic is expanding. On the other hand, when revenue traffic falls off, the amount of work required to maintain traffic facilities declines less rapidly than revenue traffic. It must be noted, however, that some kinds of repairs and replacements are likely to be diminished during a period of declining revenue and to be stimulated abnormally during an upturn.

The part performed by the railroads in the transportation function as a phase of the national economy is most adequately measured by revenue traffic. Ratios of revenue traffic to man-hours are therefore the best available measures of the productivity of labor in railroad transportation, viewed in its economic sense as a service rendered to the patrons of the railroads. But the extent of the services rendered by railroad workers to their employers in maintaining and operating the facilities required for revenue traffic is not adequately measured by revenue-traffic units. These services are indicated roughly by other units such as the car-mile, the train-mile, and the transportation-traffic unit (table 2). The transportation-traffic unit is a composite unit (table 2, note 2) representing the operation of rolling stock and indicating roughly the extent of wear and tear on track and equipment.

In 1933 revenue passenger-miles fell to 46.1 percent of the number in 1926, while passenger train-miles were 66.5 percent of the 1926 mileage (table 2). The expansion of revenue traffic after 1933 decreased the disparity; revenue passenger-miles in 1936 were 63.2 percent of 1926, while passenger train-miles were 69.9 percent of 1926. Revenue ton-miles in 1933 were 56.2 percent of 1926 and freight train-miles were 62.2 percent. In 1936, the disparity had virtually disappeared, evidencing a successful readjustment of freight traffic facilities

to a lower volume of revenue freight. Transportation traffic units in 1933 were 64.6 percent of the number in 1926, whereas revenue traffic units in 1933 were only 54.4 percent of 1926. The discrepancy was somewhat reduced by 1936, when the number of transportation traffic units was 81.1 percent of 1926, while the number of revenue traffic units was 74.1 percent of the number in 1926.

**TABLE 2.—Revenue Traffic, Car-Miles, Transportation-Traffic Units, and Train-Miles,
Class I Steam Railroads, 1926, 1933–36**

[Derived from reports to the Interstate Commerce Commission]

Year	Revenue traffic			Car-miles, transportation service (thousands)			Trans- portation traffic units ¹ (millions)	Train-miles ² (thousands)	
	Passenger- miles (thou- sands)	Ton-miles (thou- sands)	Traffic units ¹ (mil- lions)	Passen- ger service	Freight service	Total		Passen- ger trains	Freight trains
1926.....	35,477,525	443,746,487	535,988	3,885,701	28,602,714	32,488,415	1,953,620	579,031	632,586
1933.....	16,340,510	249,223,180	291,709	2,566,306	17,997,943	20,564,249	1,261,394	384,832	393,718
1934.....	18,033,309	268,710,507	315,597	2,648,126	19,488,249	22,136,385	1,348,930	386,447	421,838
1935.....	18,475,572	282,036,932	330,073	2,710,574	19,746,754	22,457,328	1,387,859	388,656	429,179
1936.....	22,416,061	338,984,369	397,266	2,933,468	22,593,804	25,527,272	1,584,574	404,787	486,645

INDEX NUMBERS (1926=100)

1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1933.....	46.1	56.2	54.4	66.0	62.9	63.3	64.6	66.5	62.2
1934.....	50.8	60.6	58.9	68.2	68.1	68.1	69.0	66.7	66.7
1935.....	52.1	63.6	61.6	69.8	69.0	69.1	71.0	67.1	67.8
1936.....	63.2	76.4	74.1	75.5	79.0	78.6	81.1	69.9	76.9

¹ Revenue passenger-miles weighted by 2.6 plus revenue ton-miles.

ing Association.) See *Monthly Labor Review* for December 1933 (pp. 1277, 1281).

² Freight ton-miles (including cars) $\times 1$, plus freight locomotive ton-miles $\times 2$, plus passenger car-miles $\times 14$. (Formula of the American Railway Engineer-

³ Miles of mixed trains are allocated to passenger trains and freight trains.

Transportation traffic units measure much more adequately than revenue traffic units the amount of services required for operating rolling stock and maintaining track and equipment in a state of efficiency. However, there are certain forms of maintenance and replacement work that are more variable than is indicated by the figures of transportation traffic units. The tonnage of rails laid in replacement in 1933 was only 22.6 percent of the tonnage laid in 1926; and in 1935 (the latest date with available figures), only 30.4 percent. Cross ties and bridge and switch ties laid in replacements in 1933 were somewhat less than half the quantity laid in 1926. Cross ties laid in 1935 were 54.9 percent of the number laid in 1926 and the quantity of bridge and switch ties laid in 1935 was 56.7 percent of 1926 (see table 3). Replacement, however, is not the major part of maintenance work. It has been estimated that not less than 50 percent of the cost of track maintenance is incurred at the rail joints.⁵ Even when replacements are postponed,

⁵ *Railway Age*, Dec. 12, 1936, p. 863: Means Used to Boost Efficiency, by L. A. Downs, president of the Illinois Central.

ordinary maintenance and repair work must in a measure be substituted. It should be noted, also, that various technological changes reduced the amount of needed track replacements and extensions. The use of track was economized and the life of rails and ties was prolonged by such changes as centralized traffic control, better quality of rails, detection of flaws, chemical treatment of ties, longer rails with fewer joints, and welding and other improved methods of repairing rails and ties.⁶ The reduction of replacement work was therefore only in part a result of postponement during the depression.

TABLE 3.—Rails, Cross Ties, and Bridge and Switch Ties Laid in Replacements and in Additions Class I Steam Railroads, 1926, 1933–35

[Based on reports to the Interstate Commerce Commission]

Year	Rails laid (tons)		Cross ties laid (thousands)		Bridge and switch ties laid ¹ (thousands of board feet)	
	In replacements	In additional tracks and in new lines and extensions	In replacements	In additional tracks and in new lines and extensions	In replacements	In additional tracks and in new lines and extensions
1926	3,818,127	483,102	80,746	9,750	275,972	57,654
1933	862,298	37,757	37,296	712	134,149	7,217
1934	1,165,304	44,821	43,306	825	155,249	8,843
1935	1,159,039	54,402	44,326	934	156,536	8,727

INDEX NUMBERS (1926=100)						
1926	100.0	100.0	100.0	100.0	100.0	100.0
1933	22.6	7.3	46.2	7.3	48.6	12.5
1934	30.5	9.3	53.6	8.5	56.3	15.3
1935	30.4	11.3	54.9	9.6	56.7	15.1

¹ Small quantities of steel ties, measured in linear feet, are not included.

Changes in Labor Productivity

As previously stated, labor productivity is ordinarily expressed in terms of the ultimate output of the industry in which the labor is engaged. For railroad employees as a whole, productivity is most adequately expressed in terms of revenue traffic units combining revenue passenger-miles and revenue ton-miles. For road passenger employees, the unit of production is the revenue passenger-mile, and for road freight employees, the revenue ton-mile. For other groups, ratios of total output to group hours may be readily computed (see table 2 for output figures and table 10 for man-hours of selected groups); but these ratios have a limited significance due to the complicated factors causing variations in the amount of employment in the various groups.

Between 1926 and 1933, the estimated increase of man-hour output of all employees was 13.8 percent; and between 1926 and 1936, 29.3

* See pp. 90, 91.

percent (table 4). These and subsequent figures exclude switching and terminal companies. The elimination of principal salaried employees gives somewhat higher figures—an increase of 16.0 percent between 1926 and 1933, and of 31.4 percent between 1926 and 1936. The man-hours here used are hours paid for. The necessity for maintaining passenger-train schedules and crews in the face of declining passenger traffic reduced the average man-hour output of road passenger employees almost one-fourth between 1926 and 1933—to 76.6 percent of 1926. The revenue passenger traffic of 1936 was less than two-thirds of the 1926 figure. Average man-hour output in 1936 was still 2.9 percent lower than in 1926 but 26.8 percent higher than in 1933. The estimated man-hour output of road freight employees was 11.1 percent greater in 1933 than in 1926, and 19.9 percent greater in 1936 than in 1926. Freight train schedules and crews are more adaptable to changes in the volume of revenue traffic than are passenger schedules and crews. Freight traffic suffered less than passenger traffic during the depression, and it is probable that technological changes in respect to rolling stock effected larger labor economies in freight traffic than in passenger traffic.

TABLE 4.—Ratios of Aggregate Production to Man-Hours¹ of all Employees and of Selected Groups of Employees, Class I Steam Railroads,² 1926, 1933–36

[Derived from reports to the Interstate Commerce Commission. 1926 = 100]

Year	Ratios of—							
	Revenue traffic units to paid man-hours of—		Transportation traffic units to paid man-hours of—		Revenue passenger-miles to man-hours of road passenger employees	Passenger train-miles to man-hours of road passenger employees	Revenue ton-miles to man-hours of road freight employees	Freight train-miles to man-hours of road freight employees
	All employees	All employees except principal salaried groups	All employees	All employees except principal salaried groups				
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1933	113.8	116.0	135.1	137.7	76.6	110.5	111.1	122.9
1934	115.0	117.1	134.8	137.2	83.8	110.1	111.8	123.1
1935	120.1	122.2	138.4	140.9	85.1	109.6	115.4	123.0
1936	129.3	131.4	141.5	143.8	97.1	107.4	119.9	120.7

¹ Hours paid for. Hours in table 1 are hours worked. Before July 1922 hours worked only were reported.

² In this and subsequent tables, switching and terminal companies are excluded.

It is possible also to measure roughly the changes in man-hour output in terms of units required to maintain and operate the traffic facilities of the railroads. The units utilized in measuring the man-hour output of all employees are transportation traffic units. In the case of road passenger employees, passenger train-miles are used; and in the case of road freight employees, freight train-miles. Transportation traffic units are derived from a formula of the American

Railway Engineering Association, by which an effort has been made to measure approximately not only the operation of rolling stock, but also the wear and tear on track and equipment, indicating roughly the amount of maintenance and replacement work normally required. The amount of maintenance and replacement work actually done does not conform strictly from year to year to the amount called for by wear and tear and deterioration. This is especially true of the individual railroad or system, for there may be a concentration of replacement in a comparatively short period, followed by slack work and abnormal reduction of some forms of employment. When all of the railroads of the country are considered, the more important forms of maintenance and replacement work are distributed more evenly, although during a period of slack business, repairs of equipment and track are more likely to be substituted in part for replacement.

The estimated man-hour output of all employees in terms of transportation traffic units was 35.1 percent greater in 1933 than in 1926 and 41.5 percent greater in 1936 than in 1926 (table 4). If the principal salaried employees are omitted, the increases are somewhat greater—37.7 percent between 1926 and 1933 and 43.8 percent between 1926 and 1936.

The postponement of some replacement work during the depression reduced nonoperating employment abnormally, especially in the maintenance of way and structures and in the maintenance of equipment and stores. Later, the postponed replacement work was widely resumed. Since transportation traffic units indicate roughly the amount of maintenance and replacement work normally required rather than the amount of work actually done during a given year, the ratios of transportation traffic units to man-hours are imperfect measures of average output. The figure for 1933 has an upward bias and the figures for the years 1933 to 1936 do not adequately measure the increase during these years.

The mileage of passenger trains—a rough measure of facilities for passenger service—declined less than total man-hours of road passenger employees between 1926 and 1933, and the ratios of passenger train-miles to road employees rose 10.5 percent. There was later a slight reversal, and the ratio in 1936 was only 7.4 percent above 1926. The ratio of freight train-miles to man-hours of road freight employees was 22.9 percent higher in 1933 than in 1926 but only 20.7 percent higher in 1936 than in 1926. The slight decline in passenger-train and freight-train mileage per man-hour between 1933 and 1936 was due largely to the upturn in revenue traffic during this period, with an increase in size of trains and in the amount of work required to handle them.

The rise in labor productivity, in terms of revenue traffic, was accompanied by a decline in labor cost per unit of output. Between

1926 and 1936, the man-hour output (hours-paid-for basis) of all employees except the principal salaried groups increased 31.4 percent. Labor cost per unit of output in 1936 was 17.6 percent less than in 1926. The reduction in labor cost and the rise in labor productivity both took place mainly between 1932 and 1936.

Technological Changes

Changes in labor productivity, especially over short periods and under conditions of rapid change in volume of business, are affected by nontechnological factors. Nevertheless, the main long-range factors are technological. Furthermore, the significance of technological changes extends beyond their effects on labor productivity and includes their impact on occupational status, conditions of work, and the safety, comfort, and quality of service.

Some of the changes in technology that are particularly characteristic of railroad transportation are improvements in the nature and mode of operating rolling stock. The general nature and significance of some of these changes are indicated by statistics relating to locomotives and cars (table 5).

TABLE 5.—*Efficiency of Rolling Stock, Class I Steam Railroads, 1926, 1933–35*

[Derived from reports to the Interstate Commerce Commission]

Year	Steam locomotives in service		Electric locomotive units in service	Pounds of coal per 1,000 gross ton-miles (freight)	Average freight-train speed between terminals	Average capacity of freight cars (tons)
	Number	Average tractive capacity (pounds)				
1926.....	62,342	41,886	419	137	11.9	45.1
1933.....	50,064	46,916	738	121	15.7	47.5
1934.....	47,436	47,712	748	122	15.9	48.0
1935.....	45,614	48,367	842	120	16.1	48.3

The number of steam locomotives in service declined from 62,342 in 1926 to 50,064 in 1933. There was a further decline to 45,614 between 1933 and 1935, the latest date with available figures. The average tractive capacity of steam locomotives in 1926 was 41,886 pounds; in 1933, 46,916 pounds; and in 1935, 48,367 pounds. The number of electric-locomotive units in service in 1926 was 419; in 1933, 738; and in 1935, 842. A significant measure of the efficiency of steam locomotives is the number of pounds of coal used per thousand gross ton-miles of freight. The number of pounds fell from 137 in 1926 to 121 in 1933, but it rose to 122 in 1934 and declined to 120 in 1935. These figures should be viewed in the light of the more extensive use of older, less efficient locomotives to take care of increased traffic pending replacement by new types of locomotives.

The average speed of freight trains between terminals was 11.9 miles in 1926, 15.7 in 1933, and 16.1 in 1935. The average capacity of freight cars in 1926 was 45.1 tons; in 1933, 47.5 tons; and in 1935, 48.3 tons. More important than the increase in the capacity of cars was the adoption of various improvements in the construction and in the mode of operating cars. Among these are improved refrigeration, more durable materials, mechanical devices for handling various types of freight, and hump yards for sorting and handling cars in terminals.

A decline in traffic decreases economies in the use of rolling stock, and an increase in traffic makes possible operating economies even when there are no technological changes. The combined effects of improved technology and of fluctuations in the amount of business are expressed in certain operating statistics (table 6).

TABLE 6.—*Operating Statistics Reflecting Technological Changes and Fluctuations in Amount of Traffic, Class I Steam Railroads, 1926, 1933-36*

[Derived from reports to the Interstate Commerce Commission]

Year	Gross ton-miles (freight) per train-hour (excluding locomotives)	Ratio of freight-train car-miles of empty cars to total freight-train car-miles	Ton-miles of revenue freight per train-mile	Revenue passenger-miles per train-mile
1926.....	20,692	.363	701	61
1933.....	27,344	.391	633	43
1934.....	28,040	.391	637	47
1935.....	28,768	.377	659	47
1936.....	29,186	.369	697	55

An indication of operating efficiency and economy is the number of gross ton-miles (freight) per train-hour. This is affected by such factors as the size and the speed of trains, the capacity of cars, and the types of freight carried, as well as the fluctuations in amount of revenue traffic. The gross ton-miles (freight) per train-hour, excluding locomotives, increased from 20,692 in 1926 to 27,344 in 1933, and there was a further rise to 29,186 in 1936. During a period of reduced revenue traffic, the proportion of empty freight cars handled tends to increase. In 1926 the car-miles of empty freight cars were 36.3 percent of the total car-miles of freight cars. During the extreme decline in revenue traffic, there was an increase in the proportion of empty freight cars to 39.1 percent in 1933. In 1936 revenue freight traffic was still almost one-fourth smaller than in 1926, but the percentage of car-miles of empty freight cars had fallen to 36.9, almost to the 1926 level. The number of ton-miles of revenue freight per train-mile is affected by such factors as the haulage of empty cars and of partly filled cars and the size and speed of trains. Similar

factors affect the average number of revenue passenger-miles per train-mile, but in the case of passenger traffic, with its more rigid schedules, operating economy during a period of decline in traffic is more difficult to maintain. The average number of ton-miles of revenue freight per train-mile was 701 in 1926 and 633 in 1933. The number in 1936 was 697, corresponding closely to the number in 1926, in spite of the fact that revenue freight traffic was 23.6 percent less than in 1926. The average number of revenue passenger-miles per train-mile was much smaller in 1933 than in 1926—43 as compared with 61. The number in 1936 rose to 55. The latter figure is only 10 percent lower than the average for 1926, although revenue passenger traffic was 36.8 percent less.

Other changes particularly distinctive of the railroad industry affect communications and the control of train movements (tables 7 and 8). There was a continued reduction in the number of manual block-signal stations. The number on January 1, 1926, was 10,841; on January 1 1933, 6,535; and on January 1, 1937, 5,545. In respect to the introduction of automatic block-signal stations and the transition from the use of the telegraph to the telephone, the changes after 1933 were comparatively unimportant. Economy of labor was promoted indirectly by increased safety and fewer accidents, as well as directly by mechanization.

TABLE 7.—Transition From Manual to Automatic Block Signals and From Telegraph to Telephone, as Reported to Interstate Commerce Commission, 1926, 1933–37

January 1	Manual block signals				Automatic block signals		Miles of road having transmission of train orders by—	
	Miles of road under—		Block-signal stations		Miles of road controlled	Number of block-signal sections		
	Tele-graphic control	Tele-phonetic control	Total	Number closed part time			Tele-graph	Tele-phone
1926-----	31,902	33,574	10,841	5,403	45,597	73,984	118,628	139,960
1933-----	20,748	31,346	6,535	4,161	63,296	91,965	96,091	151,443
1934-----	19,686	30,988	5,890	3,772	62,866	91,187	94,627	151,300
1935-----	19,026	30,219	5,752	3,711	62,804	91,146	93,907	151,098
1936-----	18,499	29,844	5,660	3,547	62,829	90,700	92,466	148,799
1937-----	17,865	29,276	5,545	3,476	63,118	90,357	90,877	148,365

Centralized traffic control is an innovation of peculiar interest because of its extensive application of the principles of remote control. This device enables employees to control the dispatching and movement of trains by direct signal indication rather than by train orders. In this way, there is a combination of functions formerly exercised by train dispatchers in authorizing train movements with the functions of other employees previously required for carrying out the dispatchers' orders by the operation of signals and switches. Indirectly, centralized

traffic control economizes other forms of employment also by increasing the speed of trains and by making possible a greater traffic density on a given mileage of track, thus reducing track maintenance, replacement, and extension. The number of installations of centralized traffic-control apparatus increased from 26 on January 1, 1930, to 181 on January 1, 1937. The miles of road affected increased from 341 to 1,358. The number of signals and switches controlled increased from 891 to 4,210. (See table 8.) The number of miles of track affected on specific dates are as follows: January 1, 1935, 1,706; January 1 1936, 1,755; January 1, 1937, 1,834. The importance of the road mileage, of the track mileage, and of signals and switches controlled is greatly enhanced by the fact that centralized traffic-control installations are usually in strategic areas. There was not merely a reduction of the amount of labor directly employed, but also an acceleration of the flow of traffic, together with an economizing of the use of tracks.

TABLE 8.—Centralized Traffic Control Installations,
as Reported to the Interstate Commerce Commission, 1930-37

January 1	Number of installations in service	Miles of road	Number of passing sidings	Number of switches controlled	Number of signals controlled		Total number of switches and signals
					Semaphor	Light	
1930	26	341	68	181	142	568	891
1931	44	569	113	357	248	982	1,587
1932	58	893	177	725	250	1,574	2,549
1933	68	987	169	800	300	1,658	2,758
1934	97	1,327	247	995	514	2,050	3,559
1935	151	1,261	244	965	590	1,905	3,550
1936	160	1,329	240	1,051	621	2,165	3,837
1937	181	1,358	239	1,196	697	2,317	4,210

Railroad companies maintain extensive telephone and telegraph systems for ordinary message traffic as well as for train movements. Both types of communication have been vitally affected by the continued installation of automatic or dial telephones and by the increased use of the teletype in place of Morse manual telegraphy and as a substitute for messenger service.

Employees directly concerned with communications and the control of train movements are train dispatchers, telegraphers, and telephoners. The functions of these groups were reduced to a slight extent only by reductions in revenue traffic. Indeed, the frequent rearrangement of train schedules due to rapid changes in the amount of traffic and to mergers and consolidations tended to increase the demands made on employees connected with communications and the control of train movements. Nevertheless, the total number of man-hours of these employees in 1933 was only 60.8 percent of the number in 1926, and in spite of the upturn in business from 1933 to 1936, the

number of man-hours declined to 60.5 percent of those of 1926 (see table 10).

Other changes have affected labor productivity and have also had a special bearing on the safety of both railway and highway traffic. Among these changes are grade separations, interlocking plants for setting up train routes at intersections and in terminals, automatic signals at crossings, and remote-control devices for operating gates in terminals and in centers of high traffic density where several gates are required within short distances. Changes such as these have speeded up the movement of traffic and have increased the average output of many types of railroad labor. They have most directly affected employees connected with bridges and crossings (bridge operators and helpers, and crossing and bridge switchmen and flagmen). The number of employees in these groups on the pay rolls at the middle of the month averaged 23,330 in 1926, 17,997 in 1933, and 17,148 in 1936 (table 10). The total hours of these groups declined more than the number of employees, the hours paid for in 1936 being 29.4 percent less than in 1926, while the number of employees was reduced 26.5 percent. If there had been no technological changes affecting these employees, their number could not have been materially smaller in 1936 than in 1926, for their work is very slightly affected by changes in the amount of revenue traffic, while at the same time the increasing complexities and dangers of highway traffic at railway-highway intersections have tended to increase the importance of their functions. The reduction in their number has therefore been very largely a result of technological changes.⁷

Employment in the maintenance of way and structures, which comprises about one-fifth of all railroad employment, is probably affected to a larger extent than other types of railroad work by deferred replacement and maintenance during depressions. The laying of rails and ties could more readily be postponed than some other types of work performed by this group; although, as previously stated, the amount of employment normally provided by the laying of rails and ties is much smaller than the amount called for by ordinary maintenance and repair work. Furthermore, the decline in the laying of rails and cross ties was in large measure a result not of postponement but of technological changes. In the first place, the chemical treatment of ties had already, by 1929, extended to a large part of the trackage of the railroads, and as a result the life of an increasing proportion of ties was prolonged. In the second place, improvements in the quality of rails, combined with new methods of detecting flaws in advance of actual breakage, such as the use of the Sperry detector, greatly reduced the amount of rail replacement. In the third place, improved

⁷ For accounts of technological changes affecting the group, see *Monthly Labor Review* for April 1932 (pp. 759-769), and February 1934 (pp. 276-278).

methods of controlling train movements, such as centralized traffic control, greatly economized the use of tracks, especially in centers of high traffic density. There was a progressive mechanization of work connected with the laying of ties and rails and with the maintenance of roadbed and right-of-way.⁸

The significance of recent methods of prolonging the life of cross ties is illustrated by the experience of one of the larger railroad companies.⁹ This company—the Santa Fe—has more than 60,000,000 ties in service, with an investment of more than \$120,000,000. The methods used include the selecting of types of woods best suited to the conditions of climate and traffic prevailing in the regions served by the company; scientific cutting and seasoning of the timbers; chemical treatment adapted to the types of timbers and to the counteracting of the agencies of decay characteristic of the region; and precautions against destruction and deterioration formerly resulting from imperfect mechanical methods in preparing the ties, attaching the rails, and other track operations. It is estimated that the life of ties on the main tracks now averages 22 years, as contrasted with 10 years 25 years ago. As a result, there was a progressive reduction of annual replacement. The annual replacement per mile of track in 1934 was only 104 as compared with 141 in 1929 and 230 in 1914.

The railroads engage in such a variety of activities that a large part of modern technology is directly or indirectly involved. They maintain extensive communication systems, carry on varied types of construction work, operate repair shops and even factories, purchase and distribute a vast variety of materials and products, and employ workers ranging widely over the professions, the skilled trades, and unskilled occupations. Materials and products used by the railroads but made by other companies have been produced under conditions of rapid technological advance. A part of the increased productivity of railroad labor has resulted from better materials and equipment purchased by the railroads. One system, the Santa Fe, employs more than 1,000 men in its supply organization. This company bought materials and supplies in 1936 costing more than \$35,000,000. In a single year, it has handled more than 200,000 requisitions, orders, invoices, and vouchers. Items of material in the company's standard stock number about 69,000.¹⁰

Technological changes affecting transportation include improvements made directly by the railroads themselves, such as the chemical treatment of water used in boilers; improvements originating outside the railroad industry among makers of supplies used only by the railroads, as safer and more durable steel rails; and improvements applicable to other industries as well as railroads, such as mechanized office

⁸ See *Monthly Labor Review* for January 1934 (pp. 52-53).
⁹ *Railway Age*, Sept. 19, 1936, pp. 402-408; Thirty-

Five Years of Continuous Cross-Tie Research.

¹⁰ *Railway Age*, Mar. 27, 1937, p. 550; Apr. 3, p. 594; and Apr. 17, p. 679.

equipment. An instance of the effects of the chemical treatment of water supplies is the reduction after 1929 of the number of fire boxes replaced annually by the Illinois Central Railroad from 115 to 15.¹¹

In the repair and upkeep of both equipment and track, striking economies have resulted from the development of welding and from the use of mobile power units for mechanizing many operations in remote areas as well as in shops and terminals. The maintenance of both track and equipment has been facilitated by the consolidation of operating divisions and the concentration of work in large mechanized shops, accounting offices, and section headquarters. There has been a significant movement for the coordination of railroad facilities with truck, motorbus, air, and water transportation. The building of new stations and the modernization of older stations have greatly economized labor at terminals. Among the many changes at terminals are improved interlocking plants, teletype service, hump yards for handling and classifying freight cars, and mechanical arrangements for the handling of freight, express, and mail. New types of cars and locomotives increased the capacity of cars and the speed and comfort of trains, and attracted additional business or checked the transfer of business to other agencies.¹²

Functions and Relative Status of Main Groups of Employees

Each of the 7 main groups of railroad employees, as classified functionally by the Interstate Commerce Commission,¹³ with the exception of the first group (executives, officials, and staff assistants), includes salaried employees, skilled workers, and unskilled workers of various types. In addition, there are frequent changes in the proportions of workers of different types within the main groups. In the maintenance of way and structures, for example, an increase in the replacement of rails and ties means an increase in the proportion of track and roadway section laborers. This in turn affects average hours and average compensation even when there is no change in normal hours or in wage rates. Comparisons of average hours and average compensation of the main groups have therefore a limited significance. The classification of railroad labor in the 7 main groups is functional. Each group is charged with the performance of a principal function in the transportation system as a whole. Aggregate figures of employment, hours, and compensation of the main

¹¹ *Railway Age*, Dec. 12, 1936, p. 863.

¹² For summaries of important recent changes in technology, see articles on Productivity, Hours, and Compensation of Railroad Labor, in *Monthly Labor Review* for December 1933, and January and February 1934 (reprinted as Serial No. R-75); *Railway Age*, May 30, 1936, p. 882; *What's New in Railroading?* and Dec. 12, 1936, p. 863; *Means Used to Boost Efficiency*.

¹³ Executives, officials, and staff assistants; professional, clerical, and general; maintenance of way and structures; maintenance of equipment and stores; transportation (other than train, engine, and yard); transportation (yardmasters, switch tenders, and hostlers); transportation (train and engine service).

groups indicate approximately the relative status of the groups (see table 9).

TABLE 9.—*Percentages of Employees, Hours Paid for, and Compensation in Main Types of Employment, Class I Steam Railroads, 1926, 1933, 1936*

[Derived from reports to the Interstate Commerce Commission]

Group	Percent of average number of all employees—					Percent of total hours paid for—			Percent of total compensation received		
	Receiving pay during month		At middle of month								
	1933	1936	1926	1933	1936	1926	1933	1936	1926	1933	1936
Executives, officials, and staff assistants...	1.1	1.0	0.9	1.3	1.1	0.9	1.4	1.1	3.0	4.4	3.6
Professional, clerical, and general.....	15.8	14.6	15.8	16.8	15.7	15.3	17.7	15.8	15.7	18.4	16.6
Maintenance of way and structures.....	21.9	23.6	23.2	20.4	21.0	22.1	18.4	19.8	15.6	12.7	13.5
Maintenance of equipment and stores.....	26.6	26.6	28.9	27.0	27.8	27.7	24.6	26.2	27.3	23.5	25.5
Transportation (other than train, engine, and yard).....	13.1	12.4	11.6	12.7	12.0	12.1	14.1	12.7	10.3	11.6	10.5
Transportation (yardmasters, switch tenders, and hostlers).....	1.4	1.3	1.3	1.2	1.2	1.4	1.5	1.4	1.8	1.7	1.6
Transportation (train and engine service).....	20.1	20.5	18.3	20.5	21.1	20.4	22.4	22.9	26.4	27.7	25.7

In 1936, executives, officials, and staff assistants comprised 1.1 percent of all employees when the numbers at the middle of the month are averaged, and 1.0 percent on the basis of those receiving pay during the month. Their total hours were 1.1 percent of the hours of all employees and their compensation was 3.6 percent of the total compensation. (See table 9.) The professional, clerical, and general group comprised 15.7 percent of the total number at the middle of the month and 14.6 percent of the total number receiving pay. Their percentage of total hours was 15.8, and of compensation, 16.6. Maintenance of way and structures employees were 21.0 percent of all employees at the middle of the month, and 23.6 percent on the basis of those receiving pay during the month. The divergence indicates a relatively large amount of part time and of labor turn-over in this group. The total hours of this group were 19.8 percent of all hours, while the group's compensation was only 13.5 percent of total compensation. Maintenance of equipment and stores employees were 27.8 percent of the total middle-of-the-month number, and 26.6 percent of the aggregate number receiving pay during the month. This group's percentage of total hours was 26.2, and of compensation, 25.5. Transportation employees, other than train, engine, and yard employees, were 12.0 percent of the total middle-of-the-month number, and 12.4 percent of the total number receiving pay. The group's hours were 12.7 percent of the total, and its compensation, 10.5 percent. Yardmasters, switch tenders, and hostlers were 1.2 percent of the middle-of-the-month count of employees and 1.3 percent of those receiving pay. The group's percentage of total hours was 1.4,

and of total compensation, 1.6. Employees in train and engine service were 21.1 percent of the average at the middle of the month, and 20.5 percent of those receiving pay during the month. The group's percentage of hours was somewhat higher—22.9 percent, and its percentage of compensation was materially higher—28.7 percent.

The status of the several groups in 1926 and 1933 as compared with 1936 varied considerably, due to various causes. These included the comparative stability of salaried employments and the unequal effects on the different groups both of technological changes and of changes in revenue traffic. In terms both of group hours and of group compensation, the relative status (although not the absolute status) of four of the groups was better both in 1933 and in 1936 than in 1926. These four groups were executives, officials, and staff assistants; professional, clerical, and general employees; transportation employees other than train, engine, and yard employees; and the train and engine service. Groups whose percentages of group compensation were greater than their percentages of hours in 1926, 1933, and 1936, were executives, officials, and staff assistants; professional, clerical, and general employees; yardmasters, switch tenders, and hostlers; and the train and engine service. Changes in relative status in respect to group compensation reflect not only changes in rates of pay but also variations in average hours and in the proportions of employees at the several wage and salary levels within each group. The groups with comparatively large numbers of unskilled workers declined between 1926 and 1936 in relative status as indicated by the percentages of hours and of compensation.

Hours and Compensation of Selected Groups of Employees

Beginning in 1933, the Interstate Commerce Commission reclassified the subdivisions of railroad labor, changing the number of subdivisions from 148 to 128. Beginning in the same year, the reports included not only the number of workers on the pay rolls at the middle of the month, as in previous years, but also the number receiving pay during the month. These changes make difficult detailed comparisons of the period before 1933 with the subsequent period; but the reporting of the number of employees receiving pay during the month makes possible more adequate estimates of average hours and average compensation for the period beginning in 1933 than for earlier years. Important groups composed mainly of wage earners in each of the seven main groups are selected in this article for analysis of employment, hours, and compensation (table 10). Some of these groups are combinations of subdivisions as classified by the Interstate Commerce Commission.

In some groups of employees, especially the salaried groups, the number on the pay rolls at the middle of the month is not radically different from the total number receiving pay during the month. But most of the groups are affected vitally and to a different extent at different times by labor turn-over, part time, overtime, furloughs, and other factors. There is, therefore, in the case of many groups a serious and variable divergence of the middle-of-the-month count from the total number receiving pay during the month. In these groups, when average hours and average compensation are obtained by dividing total hours and total compensation by the number on the pay rolls at the middle of the month, the averages are seriously exaggerated.

A special study of the actual annual earnings of more than 300,000 employees, made by the Federal Coordinator of Transportation,¹⁴ reveals that "annual average earnings, obtained from Commission wage statistics and based on annual averages of employee counts made on the middle of the month, are higher than actual earnings. For all employees, they are too high during good years by 4 to 5 percent, and during years of business depression, by 8 to more than 10 percent. * * * These averages exceed actual earnings by a greater amount for train and engine service employees than for any other occupational group." For executives, officials, and staff assistants, and other salaried employees with comparatively stable tenure, average compensation based on the number at the middle of the month diverges in a relatively slight degree from the annual averages based on the number receiving pay during the month.

Averages based on either of the two counts of employees are not to be confused with normal or standard hours and compensation. The averages derived by dividing total hours and total compensation by the number of employees receiving pay during the month are more nearly comparable with the averages regularly published by the Bureau of Labor Statistics for other industries.

Important groups consisting chiefly of wage earners in each of the seven main groups have been selected for analysis. Both counts of employees (the middle-of-the-month number and the number receiving pay during the month) are used for the years 1933 to 1936. For 1926 the middle-of-the-month number is used, as this is the only count available before 1933. (See table 10.)¹⁵

¹⁴ Federal Coordinator of Transportation. Section of Labor Relations. *Annual Earnings of Railway Employees, 1924-33*. Washington, 1935. See in particular pp. 2, 20, 79-87. Frequency distributions are given on pp. 137-173. Other studies of hours and earnings include Federal Coordinator of Transportation, Section of Labor Relations, *The Extent of Low Wages and Long Hours in the Railroad Industry*, Washington, 1936; and *Earnings and Standard of Living of 1,000 Railway Employees During the Depression*, by Carter Goodrich, for the

U. S. Department of Labor, Washington, 1934.

¹⁵ In table 10 there is a section giving figures for all employees except executive groups. This section includes the same groups as table 1, but in that table, which goes back to 1916, it was necessary to use the middle-of-the-month count of employees. In addition, since hours paid for are not reported before July 1921, hours worked were used for the index of man-hours. Table 1 also includes principal switching and terminal companies.

TABLE 10.—Number of Employees, Hours, and Compensation, all Groups Combined, and Selected Groups of Employees, Class I Steam Railroads, 1926, 1933–36

[Derived from reports to the Interstate Commerce Commission]

Year	Number of employees		Index of total hours paid for (1926=100)	Average hours per week on basis of average number of employees—		Index of total compensation (1926=100)	Average compensation per year on basis of average number of employees—		Index of average hourly earnings (1926=100)
	Average at middle of month	Average receiving pay during month		At middle of month	Receiving pay during month		At middle of month	Receiving pay during month	
	Number	Index (1926=100)							
All employees									
1926.....	1,779,275	100.0	-----	100.0	50.5	-----	100.0	\$1,656	100.0
1933.....	970,893	54.6	1,086,595	47.8	44.2	39.5	47.7	1,446	99.7
1934.....	1,008,995	56.7	1,119,678	51.2	45.6	41.1	51.6	1,506	1,357
1935.....	994,078	55.9	1,104,621	51.3	46.4	41.7	55.8	1,653	1,488
1936.....	1,065,970	59.9	1,192,957	57.3	48.3	43.1	62.7	1,734	1,550
All employees except principal salaried groups									
1926.....	1,731,327	100.0	-----	100.0	50.6	-----	100.0	1,604	100.0
1933.....	930,635	53.8	1,045,807	46.9	44.1	39.2	45.8	1,368	97.8
1934.....	967,894	55.9	1,078,082	50.3	45.5	40.9	49.8	1,429	1,283
1935.....	953,002	55.0	1,063,104	50.4	46.3	41.5	53.9	1,572	1,400
1936.....	1,023,633	59.1	1,150,191	56.4	48.2	42.9	61.1	1,657	1,475
Clerks and stenographers									
1926.....	198,653	100.0	-----	100.0	48.6	-----	100.0	1,536	100.0
1933.....	106,382	53.6	111,927	50.7	46.0	43.7	51.2	1,469	101.0
1934.....	107,466	54.1	112,454	52.8	47.4	45.3	54.0	1,534	1,406
1935.....	105,749	53.2	110,488	52.3	47.8	45.7	57.9	1,672	1,600
1936.....	109,368	55.1	114,000	54.8	48.4	46.4	61.1	1,705	1,635
Track and roadway section laborers									
1926.....	211,592	100.0	-----	100.0	47.5	-----	100.0	883	100.0
1933.....	107,846	51.0	134,384	40.3	37.6	30.2	36.3	629	505
1934.....	106,245	50.2	130,693	42.8	40.5	32.9	39.4	693	563
1935.....	103,744	49.0	128,230	42.6	41.3	33.4	42.4	764	618
1936.....	110,891	52.4	141,587	48.5	44.0	34.4	49.1	828	648
Maintenance-of-way laborers (other than track and roadway)									
1926.....	9,005	100.0	-----	100.0	47.0	-----	100.0	912	100.0
1933.....	3,843	42.7	4,816	38.9	42.9	34.2	34.4	735	587
1934.....	6,128	68.1	7,410	62.0	42.8	35.4	58.3	780	645
1935.....	5,005	55.6	6,287	52.7	44.6	35.5	52.7	865	688
1936.....	4,763	52.9	6,201	52.5	46.7	35.9	52.3	901	692
Carmen (maintenance of equipment and stores)									
1926.....	111,410	100.0	-----	100.0	47.6	-----	100.0	1,759	100.0
1933.....	53,315	47.9	50,039	39.7	39.5	35.7	38.4	1,412	1,275
1934.....	57,401	51.5	62,626	45.0	41.6	38.2	44.2	1,510	1,384
1935.....	55,926	50.2	60,578	44.6	42.3	39.0	47.4	1,600	1,533
1936.....	62,519	56.1	66,833	52.9	44.9	42.0	57.2	1,794	1,678

TABLE 10.—Number of Employees, Hours, and Compensation, all Groups Combined, and Selected Groups of Employees, Class I Steam Railroads, 1926, 1933–36—Con.

Year	Number of employees			Index of total hours paid for (1926=100)	Average hours per week on basis of average number of employees—		Index of total compensation (1926=100)	Average compensation per year on basis of average number of employees—		Index of average hourly earnings (1926=100)
	Average at middle of month		Average receiving pay during month		At middle of month	Receiving pay during month		At middle of month	Receiving pay during month	
	Number	Index (1926=100)								
Electrical workers (maintenance of equipment and stores)										
1926	10,156	100.0		100.0	50.4	-----	100.0	1,943	-----	100.0
1933	7,992	78.7	8,570	64.6	41.4	38.6	62.8	1,550	1,445	97.1
1934	8,518	83.9	9,058	72.0	43.3	40.7	71.2	1,650	1,552	98.9
1935	8,598	84.7	9,059	73.3	43.6	41.4	78.8	1,800	1,717	107.6
1936	9,054	89.1	9,485	81.7	46.2	44.1	88.8	1,937	1,849	108.7
Machinists (maintenance of equipment and stores)										
1926	60,369	100.0		100.0	47.1	-----	100.0	1,897	-----	100.0
1933	37,108	61.5	40,407	49.2	37.7	34.6	47.3	1,459	1,340	96.1
1934	38,846	64.3	41,541	54.7	40.0	37.4	53.3	1,570	1,469	97.4
1935	38,107	63.1	40,561	54.5	40.7	38.2	57.6	1,732	1,628	105.7
1936	40,663	67.4	42,781	63.1	44.1	41.9	67.8	1,911	1,816	107.6
Skilled-trades helpers (maintenance of equipment and stores)										
1926	113,684	100.0		100.0	47.4	-----	100.0	1,321	-----	100.0
1933	57,543	50.6	63,210	40.5	37.9	34.5	39.7	1,036	943	97.9
1934	61,167	53.8	66,306	45.8	40.4	37.2	45.5	1,117	1,031	99.3
1935	59,396	52.2	63,876	45.1	40.9	38.1	48.4	1,225	1,139	107.3
1936	66,395	58.4	70,677	54.5	44.2	41.5	50.7	1,350	1,268	109.5
Laborers (maintenance of equipment and stores)										
1926	102,630	100.0		100.0	49.7	-----	100.0	1,038	-----	100.0
1933	49,111	47.9	55,673	41.0	42.6	37.6	36.8	798	704	89.7
1934	51,405	50.1	57,528	44.6	44.2	39.5	40.6	842	752	91.2
1935	49,985	48.7	55,861	44.0	44.9	40.2	43.5	927	829	98.8
1936	54,727	53.3	61,010	50.6	47.2	42.3	50.9	991	889	100.6
Station agents										
1926	30,616	100.0		100.0	51.9	-----	100.0	1,855	-----	100.0
1933	24,374	79.6	25,804	75.1	49.0	46.3	70.9	1,653	1,561	94.5
1934	23,855	77.9	25,068	74.0	49.3	46.9	71.5	1,701	1,619	96.6
1935	23,437	76.6	24,633	72.8	49.4	47.0	76.2	1,846	1,756	104.6
1936	23,194	75.8	24,288	72.8	49.9	47.7	77.2	1,890	1,805	106.1
Handlers of freight, baggage, mail, and express										
1926	59,630	100.0		100.0	48.1	-----	100.0	1,167	-----	100.0
1933	27,822	46.5	35,618	40.4	41.8	32.6	36.3	910	711	89.9
1934	29,410	49.2	37,226	43.6	42.6	33.7	40.0	950	751	92.0
1935	28,517	47.7	37,220	44.3	44.7	34.3	44.0	1,078	826	99.3
1936	31,221	52.2	40,305	50.5	46.5	36.0	51.4	1,149	890	101.8

TABLE 10.—Number of Employees, Hours, and Compensation, all Groups Combined, and Selected Groups of Employees, Class 1 Steam Railroads 1926, 1933–36—Con.

Year	Number of employees		Index of total hours paid for (1926=100)	Average hours per week on basis of average number of employees		Index of total compensation (1926=100)	Average compensation per year on basis of average number of employees		Index of average hourly earnings (1926=100)
	Average at middle of month	Average receiving pay during month		At middle of month	Receiving pay during month		At middle of month	Receiving pay during month	
	Number	Index (1926=100)							
Employees connected with communication and control of train movements									
1926	64,577	100.0	-----	100.0	53.5	-----	100.0	1,900	-----
1933	41,609	64.5	46,734	60.8	50.4	44.9	57.7	1,700	1,516
1934	41,285	63.9	45,748	60.4	50.5	45.6	58.3	1,733	1,564
1935	40,400	62.6	44,921	59.6	50.9	45.8	62.2	1,890	1,700
1936	40,518	62.7	44,747	60.5	51.6	46.7	64.2	1,944	1,760
Employees connected with bridges and crossings									
1926	23,330	100.0	-----	100.0	55.6	-----	100.0	928	-----
1933	17,997	77.1	19,994	73.4	53.0	47.7	68.8	828	745
1934	17,863	76.6	19,735	72.5	52.7	47.7	68.1	826	747
1935	17,557	75.3	19,305	71.2	52.7	47.9	72.1	889	809
1936	17,148	73.5	18,873	70.6	53.4	48.6	72.2	911	828
Yard train and engine crews									
1926	116,332	100.0	-----	100.0	52.0	-----	100.0	2,172	-----
1933	71,389	61.4	77,914	50.8	43.1	39.5	48.8	1,728	1,584
1934	75,420	64.8	81,929	54.2	43.5	40.1	52.9	1,772	1,631
1935	74,865	64.4	81,375	55.1	44.6	41.0	58.2	1,966	1,808
1936	82,493	70.9	89,160	64.2	47.1	43.6	69.0	2,113	1,955
Road passenger employees									
1926	57,069	100.0	-----	100.0	59.0	-----	100.0	2,583	-----
1933	37,752	66.2	41,076	60.2	53.6	49.3	59.2	2,310	2,123
1934	37,748	66.1	40,774	60.6	54.0	50.0	60.5	2,360	2,185
1935	37,667	66.0	40,680	61.2	54.7	50.7	66.3	2,594	2,402
1936	39,009	68.5	41,878	65.1	56.0	52.3	71.6	2,699	2,520
Road freight employees									
1926	152,396	100.0	-----	100.0	58.9	-----	100.0	2,477	-----
1933	89,950	50.0	99,750	50.6	50.5	45.5	47.4	1,989	1,794
1934	95,534	62.7	104,810	54.2	50.9	46.4	51.5	2,033	1,853
1935	94,334	61.9	103,705	55.1	52.4	47.6	56.5	2,263	2,059
1936	103,639	68.0	113,788	63.7	55.2	50.2	66.6	2,427	2,210

The total number of hours paid for in 1933 was only 47.8 percent of the number in 1926, although the average number of employees on the pay rolls at the middle of the month was 54.6 percent of the number in 1926 (table 10). The number of hours paid for rose in 1934 to 51.2 percent of 1926. The number of employees was somewhat smaller in 1935 than in 1934, but the increase in average hours raised the aggregate hours paid for slightly above 1934. Total hours paid for in 1936

were 57.3 percent of the 1926 total, the increase between 1933 and 1936 being about 20 percent.

Among the 15 selected groups of employees (table 10), in the case of 7 groups both the number of employees and the hours paid for declined more between 1926 and 1936 than the total number of employees and total hours. These groups were clerks and stenographers; track and roadway section laborers; maintenance-of-way laborers other than track and roadway; carmen (maintenance of equipment and stores); skilled-trades helpers (maintenance of equipment and stores); laborers (maintenance of equipment and stores); and handlers of freight, mail, baggage, and express.

In 8 groups of employees (table 10) the declines in number of employees and aggregate group hours were less than in the case of all employees. Electrical workers fared comparatively well because of increased electrification. The other groups with declines in employment less serious than the general decline were machinists, station agents, employees connected with communication and control of train movements, employees connected with bridges and crossings, yard train and engine crews, road passenger employees, and road freight employees. All of these groups are affected in varying degrees by the circumstances, previously described, that tend to increase the amount of labor per unit of revenue traffic when business declines. They are affected in varying degrees by this factor and also by technological changes. A significant instance of the net effect of the two factors is the variation in the amount of employment of clerks and stenographers. This group may be classified as indirect or overhead labor, connected mainly with general administration, which must go on with comparatively slight curtailment when business declines. There was, nevertheless, a reduction of employment materially greater than the general reduction. Hours paid for in 1936 were only 54.8 percent of the group's hours in 1926, while the hours of all employees were 57.3 percent of the number in 1926. The decline in clerical and stenographic employment was greatly accelerated by the mechanization of office work, combined with the consolidation of accounting and administrative offices and the introduction of numerous managerial changes.

Average weekly hours of all employees, except the principal salaried groups, were 50.6 in 1926, based on the middle-of-the-month count of employees. On the same basis, average hours in 1933 were 44.1; but on the basis of the number receiving pay the weekly average was only 39.2, with an increase by 1936 to 42.9 as contrasted with 48.2 when the middle-of-the-month count is used (see table 10). Comparisons of average hours of railroad workers with those of employees in the industries reporting to the Bureau of Labor Statistics require the use of the number receiving pay during the month. Average hours in manufacturing industries in 1936 were 39.1 as compared with 42.9 in railroads.

In the 15 selected groups of railroad employees (table 10), average weekly hours in 1933 ranged from 30.2 in the case of track and roadway section laborers (the low average being due mainly to part time and high labor turn-over) to 49.3 in the case of road passenger employees. In 1936 these 2 groups still represented the extremes in the 15 selected groups. Average hours of track and roadway section laborers in 1936 were 34.4; and of road passenger employees, 52.3.

The average annual compensation of all employees except the principal salaried groups, when computed by dividing the total compensation by the number of workers at the middle of the month, was \$1,604 in 1926. On the same basis, the figure for 1933 was \$1,368. The average in 1933 for those receiving pay was only \$1,217, and in 1936, \$1,475. Among the 15 groups (table 10), the group with the lowest annual earnings in 1936 was composed of track and roadway section laborers, with an average of \$648, based on the number receiving pay. The highest average was for road passenger employees—\$2,520. Six of the 15 groups had average earnings lower than the average for all employees and 9 groups had averages higher than the general average. The annual average compensation of each of the five groups composed mainly of unskilled workers was less than \$1,000.

Changes in the status of the several groups as indicated by changes in average hourly earnings are traced back to 1926 (table 10, last col.). The average hourly earnings of all employees declined 0.3 percent between 1926 and 1933. The average for all employees except the principal salaried groups declined 2.2 percent. The largest declines, with one exception (road freight employees), were in the average hourly earnings of the five groups composed mainly of unskilled workers. The declines in these groups were as follows: Track and roadway section laborers, 9.9 percent; maintenance-of-way laborers (other than track and roadway), 11.6 percent; laborers (maintenance of equipment and stores), 10.3 percent; handlers of freight, mail, baggage, and express, 10.1 percent; and employees connected with bridges and crossings, 6.3 percent. The average for road freight employees declined 6.4 percent. In 1936 the average hourly earnings of all employees were 9.5 percent higher than in 1926, and the average for all employees except the principal salaried groups was 8.3 percent higher. In the case of the groups composed mainly of unskilled workers, hourly earnings were substantially the same as in 1926. The average for track and roadway section laborers was 1.3 percent higher in 1936 than in 1926; for maintenance-of-way laborers (other than track and roadway), 0.5 percent lower; for laborers (maintenance of equipment and stores), 0.6 percent higher; for handlers of freight, baggage, mail, and express, 1.8 percent higher; and for employees connected with bridges and crossings, 2.3 percent higher.

Both average hourly earnings and annual earnings declined less between 1926 and 1933 than the earnings of workers in most of the

other industries for which comparable information is available. The total compensation of all railroad employees except the principal salaried groups declined 54.2 percent between 1926 and 1933, while the total pay rolls of manufacturing industries declined 52.4 percent during the same period. In 1936 the aggregate compensation of railroad workers except principal salaried groups was still 38.9 percent less than in 1926, while total pay rolls of wage earners in manufacturing industries were only 20.5 percent smaller than in 1926. Revenue traffic was 26 percent less in 1936 than in 1926, while the estimated volume of production of manufactures was only 3 percent less than in 1926. The above figures of annual compensation, of average hourly earnings, and of total compensation and pay rolls are not adjusted to changes in the cost of living. The Bureau of Labor Statistics' cost-of-living index was 20.4 percent lower in 1936 than in 1926.



EFFICIENCY OF SKILLED W. P. A. WORKERS

IN ORDER to ascertain the relative efficiency of skilled workers on W. P. A. projects, the Federal Works Progress Administration made a study of the efficiency of brick and stone masons, carpenters, and painters employed on W. P. A. projects in 7 cities¹ in January 1937. The majority of the W. P. A. skilled workers were of these three trades. The international unions of these crafts cooperated with the W. P. A. in the study. Two examiners, one a representative of the union and the other a member of the engineering staff of the W. P. A., working independently, rated the workers on quality and quantity of work, the study being supervised in each city by a W. P. A. representative, who also obtained data as to years of experience, usual occupation, and relief status of the workers examined.

The following statement of the findings of the study is extracted from a recent report of the Works Progress Administration.²

Analysis of the data secured indicates that skilled workers employed on W. P. A. projects are generally of high caliber. Almost 78 percent of the workers (95 percent of the total had been taken from relief rolls) were graded as passable or better, on the basis of quality of work, by both examiners, who rated almost half this group as excellent. Only 9 percent were considered definitely inferior workers by both examiners. From the point of view of quantity of work the ratings were

¹ Baltimore, Birmingham, Hartford, Memphis, Minneapolis, Scranton, and Toledo.

² U. S. Works Progress Administration. Report on Progress of The Works Program, March 1937. Washington, 1937.

similar, the examiners agreeing that 79 percent of the workers were passable or better and that 8 percent were incapable of doing the quantity of work required of a qualified craftsman.

Both the quality and the quantity ratings for workers employed at each of the crafts varied to some extent from those for the entire body of skilled workers investigated. Carpenters included the largest proportion (88 percent) of workers rated as passable or better in quality of work and painters had the smallest proportion so graded. Carpenters also excelled in quantity of work, with 86 percent of these craftsmen rated as passable or better as compared with 75 percent of the painters and 76 percent of the brick and stone masons.

Percentages of W. P. A. Workers in 3 Crafts in 7 Cities Receiving Specified Ratings for Quality and Quantity of Work, January 1937

Rating ¹	Total	Brick and stone masons	Carpenters	Painters
Quality of work	Percent 100	Percent 100	Percent 100	Percent 100
Total.....				
Excellent by both examiners.....	38	51	52	25
Passable by both examiners.....	39	28	36	45
Passable or better by 1 examiner and inferior by other.....	14	10	5	20
Inferior by both examiners.....	9	11	7	10
Quantity of work	100	100	100	100
Total.....				
Excellent by both examiners.....	28	45	36	19
Passable by both examiners.....	51	31	50	56
Passable or better by 1 examiner and inferior by other.....	13	10	6	19
Inferior by both examiners.....	8	14	8	6

¹ Ratings were given by 2 examiners who judged the workers independently of each other.

Most of the workers examined had had many years of experience at their crafts. On an average this amounted to more than 20 years of experience at the work on which they were employed on W. P. A. projects. Almost 83 percent had 10 years of experience or more. The proportions of workers who had spent at least 10 years at their crafts varied among the three crafts, ranging from almost 93 percent in the case of brick and stone masons to about 78 percent of the painters. That the years of experience have a direct bearing on the quality and quantity of their work is indicated by the fact that the workers graded as excellent in both respects had the greatest and those judged inferior had the smallest number of years of employment at their crafts. The average years of experience ranged from about 25 for craftsmen rated as excellent to 15 years for those of inferior ability. Another significant finding is the fact that 87 percent of skilled workers were employed at the same craft on which they were engaged regularly before 1930.

PRODUCTIVITY OF COAL-MINE LABOR IN FRANCE

AVERAGE output per man per day of coal-mine labor in France decreased slightly in 1936, this being the first year since 1927 in which productivity failed to be either as high as or higher than that of the preceding year. The decline in 1936 to 0.946 short ton per man per day for underground and surface men, after an all-time high of 0.961 ton in 1935, brought productivity in the later year to the level of 1934, according to figures published by the Comité Central des Houillères de France.¹ Special interest attaches to current trends owing to the introduction of shorter working time on November 1, 1936.

The accompanying table shows productivity rates for the French coal industry as a whole and for the three leading coal fields separately. Statistics given are for underground and surface labor combined, from 1907 to 1936.

Productivity rates for the Nord, Pas-de-Calais, and Loire districts followed the same downward trend that is shown for the country as a whole for 1936. Average output per man per day at different periods of 1936 varied considerably. The productivity of labor declined from 0.976 ton in the first quarter to 0.913 ton in the third quarter. For the fourth quarter the monthly averages are 0.936 ton in October, 0.928 ton in November, and 0.940 ton in December.

Improved technique and use of mechanized processes brought about a 27-percent increase in labor productivity between 1930 and 1935. At least a part of this gain was lost in the following year, and at the end of 1936 the total increase was 22 percent in France, as compared with 26 percent in Germany, 42 percent in Belgium, 43 percent in the Netherlands, and 58 percent in Polish Upper Silesia, for the same period. All these countries except Belgium have higher productivity rates than France, the two countries here mentioned having the least advantageous mining conditions.

As the shorter working day and week were not introduced in France until almost the close of the year, the figures for 1936 do not reflect what effect, if any, shorter hours will have on productivity. Before the new regulations went into effect on November 1, the French miner had a workweek of 47 hours, of which 38 hours was devoted to productive labor, divided among 6 days. The hours are now restricted to 7 hours 45 minutes per day, 5 days per week, including time spent in descending into the mine and in returning to the mine mouth, and a 25-minute rest period during the shift. With these deductions the working week averages 32½ hours per 5-day week.

¹ Rapport présenté à l'Assemblée Générale Ordinaire du 19 Mars 1937. Paris, Comité Central des Houillères de France, 35 rue Saint Dominique, 1937.

Average Output per Man per Day of Coal-Mine Labor in France, 1907-36

Year	Output per man per day							
	France		Nord district		Pas-de-Calais district		Loire district	
	Kilo-grams	Tons	Kilo-grams	Tons	Kilo-grams	Tons	Kilo-grams	Tons
1907	695	.760	701	.773	785	.865	620	.683
1908	674	.743	672	.741	771	.850	574	.633
1909	669	.737	679	.748	755	.832	571	.629
1910	672	.741	673	.742	754	.831	571	.629
1911	682	.752	665	.733	765	.843	573	.632
1912	698	.769	666	.734	784	.864	593	.654
1913	695	.766	660	.727	754	.831	612	.675
1914	668	.736			730	.805	687	.757
1915	626	.690			713	.786	630	.694
1916	610	.672			685	.755	634	.699
1917	634	.699			717	.790	507	.658
1918	564	.622			575	.634	506	.657
1919	506	.558			575	.634	514	.567
1920	475	.524			557	.614	487	.537
1921	500	.551			553	.610	474	.522
1922	487	.537			509	.561	532	.586
1923	547	.603	486	.536	569	.627	545	.601
1924	566	.624	551	.607	580	.639	547	.603
1925	578	.637	551	.607	600	.661	556	.613
1926	612	.675	581	.640	653	.720	566	.624
1927	606	.668	589	.649	646	.712	578	.637
1928	650	.716	620	.683	679	.748	613	.676
1929	604	.765	681	.751	723	.797	620	.683
1930	604	.765	388	.758	720	.794	622	.686
1931	720	.794	699	.771	731	.806	668	.736
1932	783	.863	781	.861	784	.864	741	.817
1933	833	.918	802	.884	828	.913	786	.866
1934	858	.946	846	.933	840	.926	765	.843
1935	872	.961	836	.922	863	.951	776	.855
1936	858	.946	833	.918	837	.923	750	.827

Social Security

DISABILITY-WAGE BENEFITS FOR DU PONT EMPLOYEES

PAYMENTS for disability due to nonoccupational illness or accident among the wage-roll employees in all plants of E. I. du Pont de Nemours & Co. will be made, according to an announcement by that company dated May 26, 1937. The plan is applicable to all wage-roll employees having 1 year of continuous service, in the 81 plants of the company, located in 27 States. It was estimated that about 80 percent of the 41,000 wage-roll employees would be eligible for benefits when the plan became effective on June 15. The cost of the plan under current conditions of employment and wages, the company estimated, would be between \$1,500,000 and \$1,750,000.

The plan was formulated following a request by the works councils in five plants that some form of disability-wage benefits should be granted, and in its final form represented the combined views of the works councils in all plants and the executive committee of the company.

The plan provides that all wage-roll employees who have completed 1 year of continuous service with the company or its subsidiary companies are eligible for benefits in case of illness from nonoccupational disease or accident. In such case, eligible employees are entitled to receive full wages during disability for a maximum period of 3 months, less a waiting period of 2 consecutive regular working days, in each separate and distinct case of disability, unless such disability arises from illness or injuries intentionally self-inflicted, the use of drugs or intoxicants, or willful acts contrary to law and order. Full wages are the employee's current average hourly earnings multiplied by the number of hours the employee would have reasonably been expected to work during the period of disability. Also, employees receiving disability wages will receive any increase or decrease in base rate of salary or wages which may be made by the company to the employees as a whole.

In cases of disability due to pregnancy, the period during which disability wages may be paid may not exceed 6 weeks in any one case.

Proof of inability to work by reason of nonoccupational disease or accident is required, and employees must permit such examinations

and inquiries by the medical division of the company as may be necessary to ascertain the employee's condition, while the employees will be expected to cooperate in following such advice and directions as the medical division may give.

The plan may be modified or discontinued for any reason which the company regards as sufficient.



AMENDMENT OF FRENCH SOCIAL-INSURANCE LAW

THE general wage increases in France resulting from the enactment of the laws establishing the 40-hour week and collective bargaining¹ necessitated adjustment of the wage limits of persons in industry and commerce who are subject to compulsory insurance. Accordingly, a law was passed August 26, 1936, fixing the maximum wages of persons subject to insurance at 21,000 francs per year for persons without dependent children and at 25,000 francs for persons having at least one dependent child. The original law,² which became effective July 1, 1930, provided for wage limits of 15,000 francs, or of 18,000 francs in cities of more than 200,000 inhabitants and in certain industrial districts. This limit was increased according to the number of dependent children, up to a maximum of 25,000 francs. The social-insurance system was amended by two decree laws³ dated October 28 and 30, 1935, covering workers in industry and commerce, and agricultural workers, respectively. Under the first of these two laws, while the wage limits for insurance remained the same as in the earlier law, no contributions were required on earnings in excess of 12,000 francs, and for the year 1936 the double contribution of employers and workers was reduced from an average of 8 percent to 7 percent.

The law of August 26, 1936,⁴ provided that the maximum salary limit for the calculation of contributions, family allowances excluded, should by 15,000 francs, i. e. 1,250 francs per month if wages are paid on a monthly basis, 625 francs per fortnight, 315 francs per week, 50 francs per day, or 8 francs per hour for days which are shorter than the legal workday. Persons receiving less than 1,000 francs per year are not subject to insurance. The sickness benefit, which is payable from the sixth day from the beginning of the sickness or accident for a maximum period of 6 months, or from the fourth day if the insured

¹ See *Monthly Labor Review*, July 1936, pp. 76-77.

² *Idem*, September 1930, p. 77.

³ *Idem*, February 1936, p. 328, and May 1936, p. 1230.

⁴ *Journal Officiel de la République Française*, Paris, Aug. 30, 1936.

person has at least three children, is equal to one-half the remuneration upon which the contributions are paid, and may not be less than 3 francs nor more than 22 francs per day. In the calculation of the benefit the wages serving as the basis of contributions correspond to 75 days of labor in a quarter year. In order to be entitled to maternity benefits and milk allowances, the insured person or the wife of an insured person must have paid during the four quarters of the year preceding childbirth at least 60 francs, of which at least 15 francs must have been paid during the first quarter.

As a transitional measure, those workers who were not registered or who had been dropped from the register before July 1, 1936, and whose wages on that date were within the limits fixed by the present decree, may make their payments toward old-age pensions for the elapsed period up to January 1, 1938.

The law went into effect January 1, 1937, and is to remain in effect until January 1, 1938.



OPERATION OF FRENCH SOCIAL-INSURANCE SYSTEM 1934 AND 1935

THE number of industrial and commercial wage earners registered under the French social-insurance law on December 31, 1935, was approximately 10,000,000, and the number of workers in agriculture and forestry 1,150,000, according to a report¹ of the French Ministry of Labor covering the years 1934 and 1935. However, the total number of contributors to the fund in industry and commerce, 6,400,000, had remained practically the same since 1933, while there was an increase in the number of contributors in agriculture, these contributors numbering about 700,000 in 1935. It was explained in the preceding report that the unemployment situation and the ambiguity of the administrative provisions regarding unemployed persons, occasional workers, home workers, etc., accounted for the difference between the number of persons registered and the number of actual contributors. During 1936, however, the number of insured persons increased as a result of the decree-law of October 28, 1935, which added certain classes of workers to those already subject to compulsory insurance.

¹ Journal Officiel de la République Française, Paris, Apr. 18, 1937, pp. 139-254: Rapport du Ministère du Travail sur l'Application de la Loi des Assurances Sociales (Statistiques du 1^{er} janvier 1934 au 31 décembre 1935).

Contributions to the social-insurance fund by employers and workers, paid in stamps, checks, and cash, since the law became effective July 1, 1930, to the end of 1935, were as follows:

	Francs ¹
1930 (6 months)	1,496,736,174
1931	3,562,401,338
1932	3,261,798,160
1933	3,271,276,895
1934	3,175,994,197
1935	3,085,908,635

¹ Average exchange rate of franc in 1930 and 1931=3.92 cents; in 1932=3.93 cents; in 1933=5.03 cents; in 1934=6.57 cents; in 1935=6.60 cents.

The total amount paid into the fund during the 5½ years was approximately 17,900,000,000 francs. It will be seen that since 1931, except for a slight increase in contributions in 1933 over those in 1932, the amount of contributions had steadily decreased. This decrease was due to wage reductions and the increase in both total and partial unemployment, resulting from the economic crisis. In the first 10 months of 1936, contributions amounted to about 2,256,000,000² francs. The further decrease shown in 1936 was due in part to changes in the regulations and methods of payment of the different contributions.

The organizations administering the various forms of insurance at the end of 1935 totaled 1,216, of which 744 were primary allotment funds (*caisses primaires de répartition*) covering sickness and maternity risks, 82 primary capitalization funds covering the risks of death, old-age, and invalidity, 353 agricultural mutual-aid societies or agricultural sections of Department funds, covering sickness, maternity, old age, and death, 36 reinsurance funds, and the General Guaranty Fund. The reinsurance funds were replaced, in accordance with the decree-law of October 28, 1935, by 15 regional unions having the same territorial limits as the regional social-insurance organizations. The primary allotment funds vary greatly in size, membership in 1935 ranging from less than 500 in 82 funds to 100,000 and over in 9 funds. These funds differ also in origin, having been founded by mutual-aid societies, by trade-unions, by industry, and by groups with no particular affiliation. The number of small funds has shown a tendency to decrease, many of them having merged with the larger funds. All the funds are under the management of the General Guaranty Fund.

These organizations have expended the amounts shown in table 1 for certain types of insurance.

¹ Average exchange rate of franc in 1936=6.11 cents.

TABLE 1.—*Disbursements by Social-Insurance Organizations in France for Various Types of Insurance, 1930 to 1935*

Year	Sickness	Maternity	Death	Other	Total
	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>
1930-31.....	714,644,616	155,780,335	7,016,262	662,970	878,104,183
1932.....	875,873,375	178,084,057	30,460,686	2,011,009	1,086,429,127
1933.....	935,401,696	170,144,342	33,506,860	2,145,244	1,141,288,142
1934.....	988,983,615	171,753,237	34,133,108	1,737,058	1,196,607,018
1935 ¹	1,076,317,242	168,556,799	35,071,547	-----	1,279,945,588

¹ Provisional figures.

The social-insurance system is financed by equal contributions from employers and workers, supplemented by contributions from the State. Prior to January 1, 1936, when the laws of October 28 and 30, 1935, reorganizing the social-insurance system, became effective, the employees were divided annually into five wage classes on which the contributions were based. The individual employee's wage classification was determined at the time his annual card was renewed. The employer was required to attach stamps to the employee's annual card and the attached quarterly leaflets, which were issued by the Department insurance office. The annual card was exchanged at the expiration of the quarter in which the insured person's birthday occurred. In the first 10 days of each quarter one of the quarterly leaflets was detached and sent to the Department office.³ The percentages of industrial and commercial employees in the different wage classes covered, which were based on the cards returned at the end of March of each year, are shown in table 2.

TABLE 2.—*Percent of Industrial and Commercial Workers in Different Wage Classes in France, in Successive Periods, 1930 to 1935*

Wage class	Percent in different wage classes from—				
	July 1, 1930, to Mar. 31, 1932	Apr. 1, 1932, to Mar. 31, 1933	Apr. 1, 1933, to Mar. 31, 1934	Apr. 1, 1934, to Mar. 31, 1935	Apr. 1, 1935, to Dec. 31, 1935
Under 2,400 francs per year (8.00 francs per day).....	5.80	6.62	7.50	7.90	4.60
2,400 to 4,400 francs per year (8.00 to 14.99 francs per day).....	11.42	12.04	13.06	13.20	13.70
4,500 to 5,999 francs per year (15.00 to 19.99 francs per day).....	11.75	11.44	11.45	11.40	11.30
6,000 to 9,599 francs per year (20.00 to 31.99 francs per day).....	33.72	33.35	33.64	33.10	32.70
9,600 to 15,000 or 18,000 francs per year ¹ (32 to 50 or 60 francs per day).....	37.31	36.55	34.35	34.40	37.70

¹ According to population of place of residence, with an allowance for children between the ages of 6 weeks and 16 years, up to a maximum of 25,000 francs.

Expenditures in 1934 for compulsory sickness insurance among insured persons in industry and commerce, by 677 funds representing about 96 percent of the disbursements by all the funds, amounted to

³ For changes in procedure as established by the laws of Oct. 28 and 30, 1935, see *Monthly Labor Review* of February 1936, pp. 328-333.

557,071,000 francs, for medical, surgical, dental, and hospital care, pharmaceutical costs, etc. Cash benefits for sickness amounted to 297,221,000 francs, while the payments of one-half the old-age-pension contributions by the fund on behalf of insured persons who are disabled for more than 15 workdays amounted to 9,384,000 francs. Maternity-insurance costs during the same year, in payments for medical, surgical, and hospital care, etc., were 55,712,000 francs; in cash benefits, 39,804,000 francs; in old-age-pension-fund contributions, 1,261,000 francs; in nursing benefits, 44,177,000 francs; and in milk allowances, 2,194,000 francs. Death benefits for nonagricultural workers amounted to 30,978,000 francs.

The cost of benefits in 1934 under the compulsory agricultural-insurance system amounted to 76,002,000 francs, of which 56,418,000 francs were paid for sickness, 16,474,000 francs for the various items under maternity, and 1,649,000 francs for death benefits. These figures do not include the expenditures of two mutual-aid societies for which detailed reports were not available.

Retirement under the pension provisions of the law is optional at the age of 60. The law became effective July 1, 1930, and it was provided that there should be a transition period of 5 years before the pension provisions became fully effective. For persons retired during the transition period it was provided the pension should be equal to one-thirtieth of the normal pension for each year the contributions had been paid, but subject to a minimum of 600 francs a year. Commercial and industrial workers aged from 60 to 65 years at the time the law became effective and who came within the wage limits for compulsory insurance, but were not entitled to benefits under the Workers' and Peasants' Pension Act (April 5, 1910), were allowed to participate in the old-age insurance by paying the total amount of the annual premium for 5 years for all risks for their class; while agricultural workers could be insured by paying one-half of the annual contribution for that class of workers, with a minimum pension after 5 years of 500 francs.

Under these provisions the total number of insured aged at least 60 on July 1, 1935, who had applied for pensions by the end of 1936 was 256,539. Of this number of applications, 89 percent had received favorable action by December 31, 1936. Pension applications by persons reaching the age of 60 after June 30, 1935, in the period up to January 1, 1937, numbered 118,773. There were about 40,000 applications for invalidity payments up to the end of 1935.

By the terms of the decree-law of May 15, 1935, 75 percent of the available resources of the capitalization funds was to be placed in a common labor fund to be used for public works for the purpose of combating unemployment. At the end of 1935, 1,757,000,000 francs had been deposited in the fund for this purpose.

INCREASED UNEMPLOYMENT-INSURANCE BENEFITS IN BELGIUM

THE continued rise in the cost of living in Belgium necessitated an upward revision in the scale of allowances for involuntary unemployment, the increases being provided for by a royal decree issued April 14, 1937.¹ The report accompanying the decree gave the increases in the prices of some of the more important articles of food, such as bread, potatoes, milk, eggs, butter, beef, pork, and lard, between March 15, 1935, and December 15, 1936. These increases ranged from 10 percent for milk to 122 percent for eggs. The new regulations, which superseded a decree of July 4, 1936, providing for a 5-percent increase in benefits, were retroactive to March 1, 1937. In addition to the increases, which amounted to approximately 1 franc a day for the different classes of beneficiaries, the decree provided for the correction of certain anomalies in the regulations governing the calculation of resources of some members of the household.

The maximum basic daily allowances for the different classes of persons entitled to unemployment benefits are as follows: Heads of families, and unmarried persons and widowed or divorced persons without children, aged 25 years or over, 10 francs; unmarried persons, and widowed or divorced persons without children, aged less than 25 years, 8 francs; partially unemployed married women who are not heads of families, 8 francs; young persons between the ages of 16 and 18 years, 7 francs. A supplementary daily allowance is granted as follows: Young persons between the ages of 16 and 18 years who reside in industrial and commercial communes, 2.10 francs, and in semi-industrial and commercial communes, 1.05 francs. The supplementary allowances for unemployed heads of families, unmarried persons, widowed or divorced persons without children, and partially unemployed married women who are not heads of families are 5 francs in Brussels and Antwerp and their environs, 4.50 francs for commercial and industrial cities or districts having at least 50,000 inhabitants, and 3.50 francs for smaller cities or districts. The supplementary daily allowance in semi-industrial and commercial communes is 2.50 francs, and in agricultural communes 1.50 francs.

Family allowances for heads of families who are in a state of need are fixed at 4.50 francs per day for the housewife, and 3.25 francs for each child under 15 years of age, except those hired under a labor contract or an apprenticeship contract, and children between the ages of 15 and 16 who are either in school or unable to work, and for all children, regardless of age, who because of physical or mental incapacity are totally incapacitated for work. Young persons taking

¹ Bulletin du Comité Central Industriel de Belgique, Apr. 28, 1937, pp. 517-524.

a prescribed course of instruction may receive the allowance up to the end of the school year in which they reach the age of 16.

In the calculation of the resources of the household of an unemployed person 25 percent of the wages and salaries are exempted. The purpose of this exemption is to remove the temptation both from unemployed persons and members of the household not to seek employment because of the fear of reduction of the unemployment allowances. Also the entire resources of persons who, although customarily concerned with the care of the household, cannot receive the allowance granted to the housewife, are exempted from the total household resources in determining the state of need.



OLD-AGE PENSIONS IN SWEDEN IN 1935

A TOTAL of over 71,263,400 kronor¹ was paid in old-age and invalidity pensions in Sweden in 1935, according to the report of the Pension Board for that year.² On January 1, 1933, Sweden had a population of 6,190,400, of which 4,179,600, or 67.5 percent, were registered with the Pension Board; 3,892,600, or 93.1 percent of those registered, constituting the population aged 16 to 66 years, were insured under the compulsory old-age pension system.

Contributions

Of the total contributions of 27,469,200 kronor charged to the insured persons in 1933—an average of 7.10 kronor per person—a total of 23,554,100 kronor, or 85.7 percent, was paid, leaving 14.3 percent uncollected for that year. In 1935, voluntary contributions amounting to 3,483,036 kronor were paid, for the benefit of 9,842 persons. The average voluntary contributions of the 4,055 men were 315.30 kronor and of the 5,787 women 380.94 kronor.

Pensions and Other Benefits

The pensions paid are small, the maximum possible being a little over 400 kronor per year. By voluntary contributions a larger pension may be obtained, but the total obtainable is still small. The number of persons entitled to pensions at the end of 1935 and the total and average amounts due them are shown in the following table:

¹ Average exchange rate of krona in 1935 was 25.3 cents. ² Data are from report of Harold Carlson, American vice consul at Stockholm, Mar. 23, 1937.

*Number of Persons Entitled to Pensions, and Amounts Due,
at End of 1935*

Class of pension	Number of persons	Amounts due	
		Total	Average per person
Basic pension alone	181,010	Kronor 4,323,558.23	Kronor 23.89
Basic pension with supplementary pension	324,976	3,614,346.83	10.12
Supplementary and invalidity pension	381,794	64,927,207.72	170.06
Addition for children	13,264	2,847,356.78	214.67
Pensions paid against voluntary contributions, besides other pensions	1,499	336,874.92	224.73
Pensions paid against voluntary contributions alone	570	313,573.77	550.13

There were 2,933 persons receiving blind pensions at the end of 1935. The total amount paid in 1935 in blind pensions was 1,414,685 kronor, including 959 kronor for doctors' fees, the Government paying the entire amount. The old-age pension is reduced in cases where blind compensation is received, as such compensation is regarded as income in the calculation of the pension. In 2,129 cases in 1935 the old-age pension was reduced in this way, the total reductions amounting to 304,046 kronor.

As a means of keeping the number of disability pensioners as low as possible, 2,181,132 kronor were spent in 1935 in treatments for 7,956 persons to prevent their disabilities from becoming permanent and in training and equipment to enable them to earn a living, including medical examinations and observation and traveling expenses.

Administration

The costs of administration of the Pension Board during the fiscal year 1935–36 totaled 1,409,152 kronor, of which 1,086,408 kronor were for salaries.

The annual contributions are paid into a pension fund, which on June 30, 1936, amounted to 779,883,944 kronor. It is expected that by the fiscal year 1951–52 the general pension fund will reach 1 billion kronor, the intended maximum. It will then be possible to use the entire income thereof for the payment of pensions and administrative expenses, but a considerable amount will still have to be financed by the public authorities.

Employment Conditions and Unemployment Relief

LEGAL RESTRICTIONS ON EMPLOYMENT OF ALIENS IN LATIN AMERICA

By EUGENE D. OWEN, *of the Bureau of Labor Statistics*

BEGINNING in Chile and Guatemala in 1925, the movement in Latin America to limit the employment of aliens has spread until, in July 1937, 18 republics have some such legislation in force. According to sources available to the United States Department of Labor, Costa Rica and Paraguay have enacted no legislation on the subject. The principal legislation now effective in the respective republics was enacted in the following years: Salvador, 1926; Guatemala, 1927; Argentina and Brazil, 1930; Chile, Mexico, Nicaragua, and Uruguay, 1931; Peru, 1932; Cuba and Honduras, 1933; Dominican Republic, Haiti, and Panama, 1935; Ecuador, 1936; and Bolivia, 1937.

The minimum proportions of nationals which must be maintained in personnel covered by the basic legislation are: 50 percent, Cuba; two-thirds, Brazil; 70 percent, Dominican Republic; 75 percent, Guatemala, Nicaragua, Panama, and Venezuela; 80 percent, Colombia, Ecuador, Peru, Salvador, and Uruguay; 85 percent, Bolivia and Chile; and 90 percent, Mexico. In Haiti and Honduras the only legislation protecting nationals excludes aliens from employment in specified fields. The percentages of the pay roll which must be paid to nationals are also specified in the laws of Bolivia, Chile, Colombia, Cuba, Panama, and Peru, varying from 50 percent in Cuba to 85 percent in Bolivia and Chile.

Wide variation in the scope of the legislation is found in the republics. Only wage-earning employees are protected in Ecuador, Mexico, and Uruguay; only salaried employees in Chile, Guatemala, and Salvador; but both are included under the legislation of Bolivia, Brazil, Colombia, Cuba, Dominican Republic, Nicaragua, Panama, Peru, and Venezuela. The laws of Brazil on nationalization of labor do not apply in agriculture nor in extractive industries; but the laws specifically include agriculture as well as commerce and industry in Colombia, Cuba, Dominican Republic, Guatemala, Panama, and

Peru. Nationals employed in mining are protected in Ecuador and Peru. The legislation in Nicaragua and Salvador applies only to commercial enterprises and that in Uruguay only to public works. The laws of Bolivia, Chile, Mexico, and Venezuela do not specify occupational fields.

A more detailed account of the legislation protecting nationals in Latin American republics follows.

Argentina

Although available sources do not show for Argentina a general law restricting employment of aliens, an Argentine decree of May 14, 1930, requires that of the four elected representatives of members of the Bank Employees' Retirement and Pension Fund, two of which are regular representatives and two alternates, at least three must be Argentineans.

Bolivia

A Bolivian decree of February 2, 1937, provides that 85 percent of the employees in the service of a single employer must be of Bolivian nationality and at least 85 percent of his total pay roll in the country must be paid to Bolivians. Employers whose capital is less than 100,000 bolivianos and those who employ 5 or fewer than 5 employees are not covered by the decree. Nationals performing the same work as aliens and for the same enterprise are to be paid the same amounts and in the same manner as the latter. Persons who are considered Bolivians for the purpose of this decree include (1) an alien whose spouse is Bolivian or who has Bolivian children, (2) aliens who have resided in Bolivia for more than 10 years, excluding occasional absences which do not exceed a year, and (3) technicians who cannot be replaced by Bolivians and whose contracts have been authorized by the Ministry of Labor. Each enterprise which employs aliens is required to keep a register of its employees showing, among other data, the nationality of each employee, and at the close of each half year must send a copy of this register to the Ministry of Labor. Proceeds from fines for violation of the decree are to be used for the promotion of schools of crafts and business.

Brazil

The basic legislation for protection of nationals in Brazil was enacted on December 12, 1930, amended March 7 and July 29, 1931, and regulated by decree of August 12, 1931. At least two-thirds of all persons working for salaries or wages in industrial and commercial enterprises, including concessionaires of any governmental body, and the governmental bodies themselves, must be native Brazilians or aliens who are married to Brazilians, have Brazilian children, and

have resided in Brazil longer than 10 years. Employers in agriculture and in extractive industries having aliens on their pay roll, theatrical and other amusement enterprises and orchestras and bands which do not remain in the country longer than 6 months, and employers having not more than five employees do not come under the law. If there is more than one class of workers on the pay roll, the proportion must apply in each class having three or more workers. When there are no persons classed as native Brazilians and where the services are considered strictly technical by the National Labor Council, the proportion need not apply, but naturalized Brazilians are to be given preference over aliens who are not included with native Brazilians. When, because of lack of work, an enterprise must reduce its force, dismissal of aliens is to precede that of nationals in each class, but in such a way as to maintain in each class the two-thirds proportion, and the national worker is to be assured of his position after absence from work because of compulsory military service. Where, in the same establishment or enterprise, aliens and nationals perform identical work, the national must receive not less remuneration than the alien. A decree of July 4, 1933, transferred to the National Department of Labor the administration of the foregoing provisions, which up to that time, had been administered by the National Labor Council.

Service in the merchant marine and under port captaincies, regulated by decrees of August 19 and November 17, 1931, and June 11, 1932, is restricted to native and naturalized Brazilians in the proportion of 2 to 1 after the expiration of certain temporary expedients to care for other aliens in service when the decrees were enacted. The exercise of certain functions is limited to native Brazilians alone, but aliens married to Brazilians, who have Brazilian children, and have resided in Brazil for more than 10 years are included with these. Pilots, mechanics, and radio operators of Brazilian aircraft are to be Brazilians, unless there are none such, according to a decree of January 6, 1932; but an order of the Ministry of Transportation and Public Works issued December 8, 1936, provides that no more licenses to serve on national aircraft are to be issued to aliens and those theretofore issued are to be canceled automatically, one-third each on September 30, 1937, March 31, 1938, and September 30, 1938. Licenses previously issued to naturalized Brazilians in excess of one-third of the total shown by a table appended to the order are to be automatically canceled on September 30, 1937.

The Brazilian Code of Mines, dated July 10, 1934, grants certain tax exemptions and minimum transportation costs to mining undertakings which are required to admit Brazilians to at least two-thirds of their engineering positions, and to have at least three-fourths of their workers nationals. The Water Code of the same date provides

that concessions are to be granted only to Brazilians or to companies organized in Brazil. A majority of the directors of these enterprises must be resident Brazilians, or delegate their administrative authority exclusively to Brazilians. At least two-thirds of their engineers and three-fourths of their workers are to be Brazilians.

Chile

The Chilean Labor Code of May 13, 1931, as regulated by decree of December 18, 1933, provides that at least 85 percent of the employees of a private enterprise employing more than five employees must be Chileans; and that at least 85 percent of the pay roll must be paid to Chileans. The proportion is to be based on the total number of its employees in Chile and not upon each separate establishment of the same employer. Technical experts who cannot be replaced by Chileans are excluded. Aliens married to Chileans, widowers of Chileans with Chilean children, and aliens who have lived in the country for more than 10 years (not including absences which do not exceed a year), are to be counted as Chileans.

Colombia

The first legislation for protection of nationals enacted in Colombia was a decree of July 21, 1931, which states that no petroleum enterprise of any sort can be established or function in Colombia unless 10 percent of its administrative and technical personnel and 75 percent of its workers consist of Colombians. Temporary exception may be authorized by the Minister of Industry on proof that no qualified Colombians are available.

A law of October 31, 1936, which applies to all industrial, agricultural, commercial, or other enterprises in the country whose monthly pay roll equals or exceeds 1,000 pesos, requires that not more than 10 percent of the workers nor 20 percent of the employees may be aliens, and that at least 80 percent of the pay roll for workers and 70 percent of that for employees must be paid to Colombians. Enterprises which, at the passage of the law, were employing a higher percentage of nationals than the law requires are to maintain this percentage. The percentages of foreign personnel and pay may be increased, on approval by the Minister of Industry, with respect to indispensable technical employees, but only for the time needed to train nationals to replace them. Aliens who have lived in Colombia for 10 or more years and aliens married to Colombians are considered nationals. When persons of different nationalities perform the same functions in an enterprise, nationals have the right to demand equal remuneration and conditions and payment in the same currency. Persons employed at maritime ports in loading and unloading, either

on the docks or in the interior of vessels, are to be workers residing in Colombia.

A law of December 30, 1936, restricts the coastwise-shipping trade to vessels owned by nationals or by companies domiciled in Colombia in which not more than 40 percent of the stock is owned by aliens. National companies must guarantee to man their vessels with Colombians up to at least 20 percent during the first 3 years, at least 33½ percent in the next 3 years, and 66½ percent thereafter. The Ministry of Finance may permit certain foreign-owned companies to operate in the coastwise trade until national companies are prepared to take over and maintain regular service between Colombian ports.

Costa Rica

According to available information, Costa Rica has enacted no legislation restricting the employment of aliens.

Cuba

The basic legislation for protection of nationals in Cuba was initiated by a decree of November 8, 1933, regulated and amended by decrees of December 6 and 20, 1933, and November 17, 1936, and resolution of April 30, 1936. Every agricultural, industrial, or commercial enterprise operating in Cuba must employ native Cubans for at least 50 percent of its salaried and wage-earning personnel and must pay at least 50 percent of the pay roll to native Cubans. Enterprises already employing native Cubans in a higher proportion than the law prescribes must maintain and in the future increase that percentage, except that naturalized Cubans may not be entirely excluded. Vacancies and new positions must be filled by native or naturalized Cubans, and dismissals are to be limited to aliens, so long as there are any on the pay roll. In the computation of percentages of native Cubans, certain representatives and attorneys in fact and certain technicians who cannot be replaced by Cubans are not counted.

Each employer is required to classify his wage-earning personnel according to craft or class of work and his salaried employees by salary groups, and to maintain within each class the percentage of nationals established by the law, but the percentage of pay for nationals must be met only in the aggregate salaries of all classes. If he has several establishments or branches which function independently of each other, the legal percentages must be maintained in each of them separately. Enterprises which regularly employ substitute or temporary personnel must establish in that personnel the proportion of nationals fixed by the law, and must fill all vacancies with native or naturalized Cubans. Normal interruptions of opera-

tion are not to be construed as creating vacancies. Industrial or commercial establishments employing only one person (but when this post becomes vacant only a Cuban may fill it), family labor, domestic service in private homes, and any positions held by members of the Army of Liberation or the veterans of the Spanish-American War who have lived in Cuba longer than 10 years, do not come under the law.

The Secretary of Labor, municipal mayors, and correctional judges are charged with the administration of the law in their respective jurisdictions.

A decree-law of April 3, 1936, provides that engineers must be Cubans, but that engineers from countries which allow Cuban nationals to operate as engineers within their limits may serve in that capacity in Cuba. A decree of April 27, 1936, regulated the employment of aliens in public works of the State, requiring that the personnel employed on such works be of the nationality fixed by the law authorizing the works, but in cases where aliens who live outside of Cuba must be used, such employment must be authorized by the Secretary concerned. Labor Department resolutions of June 29 and October 13, 1936, strictly regulate the employment of alien technicians, stipulating that authorizations are to be valid for a period not exceeding 1 year, and that an employer must give preference in employment to Cubans. On January 30, 1937, a resolution issued by the Secretary of Labor provided for supplying labor needs in the sugar industry by transfer of workers from Provinces with a surplus of workers to those which have a shortage, and the immediate repatriation of Antillians who are thus replaced.

Dominican Republic

The principal legislation on nationalization of labor in the Dominican Republic is that of February 12, 1935, and August 4, 1936. Commercial, industrial, and agricultural enterprises in the Dominican Republic employing 10 or more salaried or wage-earning employees are required to have at least 70 percent Dominicans. An employer having 9 employees must employ 6 Dominicans; 8 or 7 employees, 5 Dominicans; 6 employees, 4 Dominicans; 5 or 4 employees, 3 Dominicans; 3 employees, 2 Dominicans; 2 employees, 1 Dominican; and if there is only 1 employee he must be a Dominican. The employer is required to classify his personnel by wage groups and to maintain within each of these the 70 percent prescribed by law. Persons who are not included in the computation of the percentage are (1) duly authorized representatives and attorneys in fact of the employer; (2) certain technical employees and workers who cannot be replaced by qualified Dominicans; (3) persons engaged in family enterprises in the home; (4) aliens who have lived in the country continuously for not less than

2 years and have married nationals; (5) aliens who have lived in the country continuously for not less than 5 years and have Dominican children; and (6) aliens who, on February 16, 1935, had lived in the country continuously for at least 3 years.

The legal percentage must be maintained by enterprises regularly employing temporary workers and in reduction of personnel by the employer for any reason, but temporary interruptions of work for reasons inherent in the nature of the work are not considered as creating vacancies. The President of the Republic is authorized to issue permits, valid for not longer than a year, for the employment of unskilled agricultural labor in excess of the proportion established by the law. A register of unemployed Dominicans is to be maintained by the Secretariat of State of Labor, Agriculture, Industry, and Commerce to assist nationals in securing employment.

By a Dominican law of November 21, 1927, it is prescribed that lawyers must be Dominican citizens. A law of December 16, 1930, specifies that no alien may be employed in public office, and thus precludes the employment of alien teachers. Alien technicians under Government contract are excepted from the provisions of this law. The constitution of 1934 requires that one must be a Dominican citizen to belong to the armed forces of the Republic.

Ecuador

In Ecuador the legislation of February 14, 1936, which regulates inspection of mines, includes among official duties of mine inspectors that of seeing that mining concessionaires employ in their operations at least 80 percent Ecuadoran workers.

Guatemala

In Guatemala the protection of nationals is governed principally by a decree of December 19, 1927, regulated by legislation of February 29, June 13, and July 28, 1928. Commercial, industrial, and agricultural enterprises are required to have in their salaried personnel at least 75 percent Guatemalans. This percentage does not apply to employees who are required to have a professional degree, if their profession is one which is not regulated in Guatemala; if it is, Guatemalans are to be given preference in employment. Employees are defined as persons who are able to read and write and who render service to an employer for a periodical salary or share in the income from the business, but the decree excludes stockholders who receive not less than 25 percent of the income from the business and persons whose labor is physical, even when they are able to read or write. Violations of the law are subject to a fine of double the salary of the employee replaced, and a Guatemalan must be put in the place. The adminis-

tration of the legislation as regards commercial, industrial, and banking enterprises is entrusted to the National Labor Department and as regards agriculture to the General Agricultural Office (*Dirección General de Agricultura*).

A decree of January 25, 1936, states that aliens may not practice in Guatemala a profession for which a professional degree is necessary except under conditions fixed by law or treaties, but the Government may, under circumstances specified in the decree, authorize aliens to hold certain educational positions, and to practice professions for which instruction is not available in the Republic.

Haiti

A Haitian decree-law of October 16, 1935, as amended by that of August 22, 1936, limits participation in retail trade in Haiti to Haitians of origin—that is, persons born of fathers who were themselves native-born Haitians or persons who, though not acknowledged by their fathers, were born of mothers who were native-born Haitians—and to husbands of Haitian women who had lost their citizenship by marriage to aliens but had subsequently regained it. Though alien wholesale dealers may not engage in retail trade, a Haitian of origin engaged in wholesale trade may be employed in any capacity in retail trade.

Honduras

The constitution of 1936 of Honduras states that aliens may not hold public office or employment, but may hold positions in instruction (*enseñanza*) and in the arts (*las artes*). It is required by legislation of May 4, 1933, and April 4, 1934, that radiotelegraphers and other telegraphers be Hondurans by birth.

Mexico

The Mexican Federal Labor Law of August 18, 1931, specifies that the employer in any enterprise must employ not less than 90 percent Mexicans in each of the classes of skilled and unskilled workers, unless, in the case of skilled workers, the competent board of conciliation and arbitration authorizes a temporary reduction of this percentage. When the number of workers is not more than 5, at least 80 percent of them must be Mexicans. In the computation of the percentage, managers, directors, administrators, superintendents, and general heads of enterprises are not included. Company physicians must be Mexicans. Employers must, under similar circumstances, give preference to Mexicans over aliens. Railway companies shall employ only Mexican workers. In managerial positions they may employ the necessary foreign personnel and in technical or

administrative positions they may employ foreign personnel exclusively when no Mexican personnel is available. No alien member of a union is permitted to be a member of its board of directors. The population law of August 24, 1936, prohibits the practice of the liberal professions by aliens in the national territory except in special cases authorized by the Secretariat of the Interior.

Nicaragua

A Nicaraguan law of February 6, 1931, provides that in every commercial enterprise or establishment in Nicaragua not less than 75 percent of its employees and workers must be Nicaraguans. The law is to be enforced by certain local authorities. Fines are prescribed for violation of the law, and in addition the alien must be replaced by a national.

Panama

In Panama a law of January 5, 1935, establishes 75 percent as the minimum proportion of nationals to be employed in commercial, agricultural, or industrial enterprises operating within the country, and nationals are to receive not less than 75 percent of the pay roll. Nationals include Panamanians by birth or adoption and aliens who have lived in Panama for 20 years or who are married to Panamanians. Experts and technicians necessary to the operation of enterprises are not considered in the computation of the percentage. The chief of the labor office is authorized to assess a specified fine for noncompliance, and the enterprise must replace the alien with a national. A law of October 26, 1934, set the proportion of nationals in orchestras playing for profit in Panama as 75 percent of the musicians. Certain orchestras which are not maintained for profit are exempt from compliance.

Paraguay

According to available information there are no legal restrictions on the employment of aliens in that Republic.

Peru

Nationals in Peru are protected under laws of April 8, 1932, and April 12, 1933, and decrees of August 31, 1933, July 26 and August 1, 1934, June 26, 1936, and May 15, 1937. All establishments in industry, commerce, agriculture, and mining operations in Peru are required to maintain in their salaried and wage-earning personnel not less than 80 percent Peruvians, and not less than 80 percent of the pay roll is to go to Peruvians. The computation is to be based on the total personnel and pay roll of a specified place of employment, but if necessary to secure the percentages of both personnel and pay roll prescribed by

law, salaried and wage-earning employees may be considered separately. In the computation of the percentage, aliens married to Peruvian women, or widowed and having Peruvian children, are to be counted as Peruvians. The percentage of nationals established in this legislation does not apply to (1) certain theatrical artists employed in Peru less than a year; (2) certain persons employed on foreign-owned vessels or aircraft engaged in international transport service; (3) certain aliens under contract or who, on April 8, 1932, had been employed for 10 consecutive years in the same enterprise in Peru; and (4) proprietors of a business and partners, members of boards of directors, and shareholders in a company whose names do not appear on pay rolls.

The decree of June 26, 1936, which was regulated by that of May 15, 1937, extends the 80-percent rule to alien professional persons and artisans and to the number of commercial and industrial establishments in each Province in Peru; that is, the proportion of aliens of each nationality registered for the practice of each profession or for the carrying on of each business or industry cannot exceed 20 percent of all registrants for that profession, business, or industry, if the total number of such registrants is five or more than five. Aliens may establish any legitimate new industry in the localities where none of that kind has yet been established. The 20-percent proportion of alien Indian labor of each nationality permitted on each large estate is based on the total number of Indians employed on that estate and also on the total amount of land on that estate cultivated by the Indians.

Persons and enterprises operating in Peru when the decree of June 26, 1936, was passed may continue their work, but may not transfer their profession or enterprise to an alien except within the legal percentage, and interruptions in the exercise of rights granted before this legislation are to cause the cancelation of these rights.

Salvador

In Salvador, a law of May 21, 1926, and decrees of May 31, November 4, 1927, and August 21, 1929, prescribe that not less than 80 percent of the persons performing managerial, clerical, or organizing duties in a commercial establishment in Salvador are to be Salvadoreans.

Uruguay

At least 80 percent of workers employed upon public works in Uruguay must be native Uruguayans, according to laws of October 23 and December 24, 1931. The other persons employed may be naturalized Uruguayans or aliens. A law of January 20, 1933, provides that, for the purpose of calculating the percentage of nationals to be employed upon public works, the technical and administrative personnel of the contracting organization are not to be included.

Venezuela

The basic law in Venezuela for protection of nationals is that of July 16, 1936, which states that at least 75 percent of all persons employed in establishments or businesses of any kind in Venezuela must be Venezuelans, but the inspectorate of labor may, because of technical considerations, temporarily reduce this percentage. Superintendents and employees in direct contact with the workers must be Venezuelans, provided special technical qualifications are not required. In cases of immigration directly contracted or controlled by the Federal Government, special regulations may be issued to modify the 75 percent. A law of July 17, 1936, relating to the mining of hydrocarbons and other combustible minerals, requires that not less than 90 percent of the day laborers, 50 percent of the technical employees, and 75 percent of the office employees are to be Venezuelan citizens.

SOURCES.—This article is based on data from the following sources:

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FUTURE OF EMPLOYMENT IN THE MINERAL INDUSTRIES

LITTLE likelihood exists of the mineral industries as a group furnishing employment to a much larger volume of workers than in the 1920's, according to the findings of a study dealing with technology and the mineral industries made for the National Resources Committee.¹ This

¹ U. S. Works Progress Administration. *Technology and the Mineral Industries*, by F. G. Tryon and others. Washington, 1937.

conclusion is presented in a general report which will form part of a symposium on technological trends and their social implications.

In the mineral industries the influences that tend to reduce job possibilities—that is, mechanical improvements—are operating in the face of growing physical difficulties in mining. This is in contrast with conditions in manufacturing industries, and at times the effects of depletion more than offset improved methods of extraction, discovery of new resources, and better transportation.

Changes in labor requirements in the different branches of the mineral industries, however, are not expected to move in the same direction within the next few years, in the opinion of the experts presenting the report under review. For example, it is stated that "in coal mining the forces making for labor displacement are strong enough to be a cause of some concern." Neither is metal mining expected to show an increase in employment, but in oil and gas production the indications are that labor requirements will tend upward. As metal proves more difficult to mine, it is believed likely that fuel will be needed in greater volume for mining, concentrating, and smelting low-grade ores. Should supplies of oil and gas fail to meet expectations, there would then be an increased demand for coal.

Mechanization is also expected to bring about changes in living conditions for mine workers. As the investment in mechanical equipment is increased, larger operating units result. The size of plant in turn affects the location and size of mining towns. Fewer company towns are therefore likely to be built in the future and workers will drift from isolated camps to central communities. This movement is already under way, as hard roads and cheap automobiles enable labor to live in permanent towns, riding to and from work in the surrounding area.

A high proportion of the costs of technological change is borne by workers, the report states. While changes in technique should aid in improving working conditions, this does not always result. As methods are altered, the needs for certain skills are done away with, and the degree to which labor profits often depends upon such factors as economic stability of the mineral industries, adequacy of protective legislation, and the bargaining power of the workers.

Mine workers, who formerly worked independently, are more and more being organized into groups under modern mechanized systems of production. As old skills cease to be required, a higher turn-over of workers is inevitable, with losses in working time. Men require less sheer strength than formerly and better knowledge of the mines and more skill in operating machinery. In handling mobile machines, particularly, men need "quick reaction time, a sense of responsibility, and intelligence." This entails securing a higher proportion of workers with education and will tend to attract youths to the mines who would ordinarily seek surface employment. These influences are likely to affect the position of the older worker adversely.

In the chapter dealing with technology in coal mining the discussion deals with bituminous production. This branch of the industry has experienced the greatest substitution of power for human labor in strip or open-cut mining. The immediate outlook points to growing production from stripping. So far it has proved practicable to remove as much as 50 feet of overburden to recover a 5-foot coal seam. Size, power, and range of the shovels employed have been materially increased. Only one-half to one-third as much labor is required in open-cut mining per ton raised as in deep workings. Ultimately, however, the limit for production from open cuts will be reached as coals nearest the surface are mined. Coal so produced yields a higher percentage of the mineral resource than in underground mines, but creates other problems, in that the surface is often of little value as a soil resource. Mechanical cleaning and loading are also playing an important part in labor displacement.

To curb these movements, that is, "to block the advance of mechanization, would offer no solution for the difficulties of the industry." The alternatives, as the writers of the report reviewed see them, are to place the entire burden on the mine workers by cutting wage rates, or to use mechanization to meet the competition of other fuels or of coal from districts paying lower rates.



UNEMPLOYMENT CONDITIONS IN NEW SOUTH WALES, 1933 AND 1936

A SPECIAL committee, appointed in New South Wales to study several phases of unemployment as of 1936, found that conditions had materially improved since the census taken 3 years earlier.¹ The volume of unemployment was reduced from 27 percent of the wage earners in June 1933 to 8.3 percent in November 1936. Building construction, with a 60-percent rate of unemployment in the earlier census, had made considerable progress. Employment in rural industries failed to increase in proportion to the expansion of rural production, owing to the development of mechanization, and this tendency is regarded as being a permanent feature in these industries. Employment declined in coal mining, partly as a result of the substitution of oil for coal and also owing to the restriction of mining operations to seams which could be worked economically. Factory employment was actually higher in 1935-36 than in the previous peak year, 1929, although it had not quite gained its former ratio to the total popula-

¹ New South Wales. Department of Labor and Industry. *New South Wales Industrial Gazette*, Sydney, February 1937, pp. 335-362: Unemployment Survey.

tion. These findings are supplemented by data on public works and relief expenditures, registration with State labor exchanges, health, and duration of unemployment.

In the 3 years ending June 1929 expenditures for public works amounted to £22,000,000 per year. The amount so expended was reduced to £4,700,000 in 1931-32 and subsequently increased to £12,400,000, including relief works. Part-time relief employees and those in receipt of relief numbered 100,000 in June 1933. Decreases in the number aided were recorded from that time until November 1936, when the total had dropped to 57,700 persons. If dependents are added to the number of men receiving food relief, the decline in the same period is from 193,000 to 64,100 persons. Special inquiry covering 1,040 men withdrawn from relief work disclosed that 7 percent obtained private employment and 78 percent went back on food relief.

When the registration of men with the State labor exchanges is studied to show unemployment trends, it appears that there is a substantial proportion of "chronic unemployment." Registration decreased from 108,800 in August 1933 to 83,500 a year later, but the decrease was slower thereafter. The survey further showed that 66 percent of the men registered had not been regularly employed in their usual occupation for 3 years or longer. Registration in metropolitan labor exchanges remained fairly constant.

Of those men whose employment history during the period 1933-36 was studied, 90 percent had no illness during the last 12 months and 84 percent were free of illness for the 3 years. However, nearly 2 percent of the total had illnesses of as long as 1 year or more.

About two-thirds of the men were classified in occupations requiring little or no skill. The most important group numerically was general laborers. Other large groups were in manufacturing, building, land transport, mining, commercial storage and retailing, and rural.

Housing Conditions

GOVERNMENT AID TO HOUSING IN CANADA

UNDER the Government-aid loan system for home builders inaugurated in Canada by the Dominion Housing Act, 1935, a total of 808 loans amounting to \$5,692,842, or \$7,045 per loan, had been made for new dwellings at the end of February 1937. The progress under this plan is reported to have been gradual, in a summary of loans and of the provisions of the law recently prepared by the Director of Housing, Department of Finance, Ottawa, Canada.¹

The housing law authorized the Minister of Finance to make advances and to pay expenses of administration to the extent of \$10,000,000. The act provides for loans on the construction of new dwellings only, including single-family houses, duplexes, and apartment houses. Loans are secured by first mortgages running jointly to an approved lending institution and to the Dominion Government. Ordinarily the loan on a dwelling is limited to 80 percent of the cost of construction or the appraised value, whichever is smaller. Of this sum the lending institution advances 60 percent and the Government 20 percent, and the remaining 20 percent is provided by the borrower. Borrowers pay at the rate of 5 percent on loans obtained, and the Government advances are charged for at 3 percent per annum. Loans are made for 10 years, subject to extension for a like period upon revaluation of the security and on conditions satisfactory to the parties concerned. Loans are subject to amortization in 20 years, but more rapid retirement of the mortgage loan may be arranged by the borrowers.

The writer of the article here reviewed states that the plan has been in operation long enough to permit comparisons. Total loans in the last quarter of 1936 showed an increase of 150 percent over the corresponding period in 1935. Despite the usual seasonal decline in new residential construction, loans in September 1936 totaled almost as much as in April of the same year and December loans increased over those of September.

Although the average loan per dwelling over the entire period for which figures are given was \$7,045, the loan per family unit is estimated

¹ *Journal of Land and Public Utility Economics*, May 1937 (pp. 204-206); *Housing Developments in Canada*, by F. W. Nicolls.

at \$4,744, as many of the dwellings for which loans were granted were two-family and apartment houses. In all 1,200 family units were built. New properties aided by the Dominion Government housing plan represented 15 percent of the total value of \$42,858,000 expended on residential construction in 1936.

New and liberalized regulations to encourage lending institutions to make loans to prospective house owners of moderate means were introduced in September 1936. This arrangement provides for allocating losses on loans as follows: On an 80-percent loan on a single-family house, the Government bears 80 percent of the loss on loans of \$3,000 or less; 75 percent on loans between \$3,000 and \$3,500; and 70 percent on loans of \$3,500 to \$4,000. Formerly the Government bore a lower ratio of losses and the lending institution was responsible for a higher proportion. Variations of the new scale of liability for losses have been fixed for duplex and apartment houses. Introduction of these regulations has brought about an increase in loans of \$3,000 and less, and this is regarded as insuring the accomplishment of the purposes of the housing act, namely, enabling the man of moderate means to own his house.

Assuming that a low-cost house is one costing \$5,000 or less, mortgages of \$4,000 or less (80 percent of cost) indicate the extent to which loans are being utilized to finance houses for those of moderate means. On this basis approximately half of the units on which loans have been secured fall in the low-cost category.

Intangible gains under the program are stated to include making the Canadian people "house conscious." "It has shown people, particularly those of low income, that it is possible for them to have a well-built, convenient, modern home, structurally sound and of pleasing appearance at a minimum of cost."

Minimum standard specifications for construction have been furnished by the Government under the housing law. These specifications have served to publicize good building and are being adopted for houses built without, as well as with, Government aid. Plans have been approved for a house costing, in most parts of Canada, as little as \$2,400. This dwelling has a living room, kitchen, bathroom, three bedrooms, full basement, and central heating system, and is insulated. If such a house were constructed on a \$300 lot the total cost would be \$2,700. On this sum an 80-percent mortgage of \$2,160 could be placed and the owner would be required to furnish \$540. The monthly cost of paying interest and repaying the loan in full would amount to \$14.12 for 20 years. The report adds: "Surely, this can be said to be getting near to the ultimate in low-cost housing in Canada where building costs are comparatively high for many reasons, of which our climate is not the least." Saving the required \$540 for a down pay-

ment, it is stated, "may be insurmountable to many in the low-income group. It may entail great sacrifice by the family, but the family which is not willing to make sacrifices for a home of its own might, perhaps, be better off not to own its own home."

Comparing the costs of house purchase under the Canadian and the United States Government plans it is shown that in both countries the owners would be required to have an equity of \$1,000 in a \$5,000 house. In Canada, monthly payments would amount to \$26.15 for 20 years and the total cost of ownership would be \$6,276; in the United States, under the National Housing Act, the monthly payment would be \$30.11 for 19 years and 6 months and the total cost, \$7,045. If a similar house were built in England, equipped for the more rigorous climate of Canada, it would cost about the same as in Canada. A down payment of only 10 percent would be required in England and the monthly payment would be \$27.79 for 21 years, bringing the cost to \$7,005. With a 20-percent equity, final cost in England would be \$6,224 and the monthly payment \$24.70 for 21 years. Thus a \$4,000 Dominion Housing Act mortgage costs approximately 20 cents per month more, including interest and principal, than in England.

Minimum Wage and Maximum Hours

ONTARIO MINIMUM-WAGE ACT OF 1937

THE Minimum Wage Act of Ontario, 1937,¹ revises existing minimum-wage legislation covering female employees. The new law includes both male and female workers under provisions applicable to all wage earners in any business, trade, work, undertaking, or occupation, with the exception of farm workers and domestic servants. The Industry and Labor Board set up in the Ontario Department of Labor under the amended Department of Labor Act is charged with the administration of the 1937 Minimum Wage Act. The Board is empowered to arrange conferences between employers and employees for the purpose of securing data on prevailing wages and employment conditions.

This body may accept recommendations for such conferences in regard to any matters that may be taken up by an order of the board. Authority is given the Board to fix minimum wage rates for all employees and, in general, to enact such provisions with reference to employment conditions as may be considered "necessary for the betterment of the physical, moral, and intellectual well-being of employees." The functions of the Board include the designation of the business or parts thereof and the zone or zones to which an order is to be applicable, and the classification of employees.

This agency may also determine the minimum wages for the prevailing work period in an establishment or for any other work period upon which the board may decide; fix the maximum working hours with reference to any minimum wage set up; establish minimum hourly wage rates for overtime, provided these rates shall not be less than one-fortieth of the minimum wage per week; decide on minimum rates of wages per hour for employees who usually work less than 40 hours per week, provided these hourly rates shall not be less than one-fortieth of the minimum wage per week; establish a particular method of payment for any classification of employees; and specify conditions under which deductions are to be made for loss of time due to illness, holiday, or other causes.

As in the preceding minimum-wage act for women, the working hours for which the minimum wage is established may not be more

¹ Canada. Department of Labor. Labor Gazette, Ottawa, May 1937, pp. 504-505.

than (a) 48 hours in a municipality having a population of more than 50,000; (b) 50 hours in a municipality having a population of from 10,000 to 50,000; and (c) 54 hours in any other municipality, or in any locality which is not a municipality.

A fine of not less than \$50 may be imposed upon an employer who discharges or in any way discriminates against an employee who has given information to the Industry and Labor Board or taken part in proceedings under the statute.

An employer who violates the provisions of an order regarding wages and hours is now liable to a minimum fine of \$25 for each employee affected and, if such fine is not paid, to imprisonment for not to exceed 6 months. For a subsequent violation the minimum penalty is \$50 for each employee concerned or imprisonment for not over a year.

As under the previous act, a convicted employer must pay to the Board, on behalf of the employees involved, the difference between the wages paid and the fixed minimum. If the court in calculating the amount of arrears finds that the employer has not kept accurate records, it is to be presumed that the employees under consideration have been employed for the maximum weekly hours permitted and are entitled to the full weekly wage for the entire period of their employment.

APPLICATION OF THE 40-HOUR WEEK IN FRANCE

THE shorter working week instituted in France by the law of June 21, 1936, was in effect by the last of June 1937 in a majority of industries. The law is made effective in each industry by a decree fixing the method of application.

The law¹ provides that the 40-hour week shall be applicable in every type of commercial and industrial establishment, whether public or private, secular or religious, including establishments of an educational or welfare character, hospitals, and insane asylums. In underground mines the time underground for each worker may not exceed 38 hours and 40 minutes per week. Decrees covering the individual industries are issued by the council of ministers, after consultation with the competent sections of the National Economic Council and with the employers' and workers' organizations concerned. No reduction in the standard of living may result from the application of the law, and it is provided, therefore, that its application may not be the determining cause for a reduction in the remuneration of the workers either in wages or in other payments.

¹ Bulletin du Ministère du Travail, Paris, Avril-Juin 1936.

The majority of the decrees which have been issued do not specify the division of the workweek which shall be followed, but permit a choice between the 5-day week (the so-called "5-8" week), the 5½-day week, and a 6-day week of 6 hours and 40 minutes per day. Unless otherwise specified in the decree, the choice is left to the employer. In some cases in which one of these sets of hours is specified, another may be put into effect if the employers and workers in the undertaking or locality agree on that plan. Where a choice of the hours to be worked is allowed, it is generally provided that hours which have been fixed by collective agreement must be followed. Rotation of work to allow different days for the weekly holiday is forbidden by many of the decrees. In general, loss of work by reason of force majeure, seasonal unemployment, breakdown and spoilage, or other causes, may be made up, a limit being set to the supplementary hours allowed, while additional working time is allowed for operations in the interest of safety and the national defense, or public service at the order of the Government. In these cases the limits are fixed in each case by the Minister of Labor or the Minister who is responsible for the work in question. The decrees generally provide for additional hours, ranging in the majority of cases from one-half hour to 2 hours per day, for maintenance men, technicians, drivers, etc. Time and one-quarter is the usual rate paid for such overtime. The hours of watchmen are in general 56 per week, averaged over a period of 3 weeks. It has been found necessary in some industries to provide for a gradual transition to the new hours and in a few cases to allow more than 40 hours. In the iron and steel industry,² for example, which had been operating in general on a 56-hour week, the 48-hour week was put into effect for a period of 3 months from the date of the decree—October 27, 1936—after which a four-shift system with a 42-hour week was made effective. In hair-dressing establishments³ the working week is fixed at 45 hours in Paris, 47 hours in other localities in the Department of the Seine, 48 hours in cities of more than 250,000 inhabitants, 50 hours in cities of 50,000 to 250,000, and 52 hours in cities of less than 50,000 inhabitants. In retail stores other than food stores, the 40-hour week with Monday closing was made effective by a decree of March 31. Owing to the difficulty presented by 2 days' closing each week, in view of the large number of visitors expected through the summer and fall for the Paris Exposition, the decree was amended⁴ on May 21, to permit the rotation of work among employees so that the stores might remain open on Monday. The decree covering retail food stores⁵ was issued April 27, and provided for a working week of 46 hours, the reason for the longer hours being the intermittent character of the work in these stores. During the first 3 months following

¹ Le Peuple, Paris, May 15, 1937.

² Idem, May 22, 1937.

⁴ Idem, May 30, 1937.

⁵ L'Activité Moderne, Paris, May 22, 1937.

the issuance of the decree, the hours of presence may be fixed at 50 per week, 48 for a second 3-month period, and 46 thereafter. The 46 hours are considered to correspond to 40 working hours.

In the French merchant marine the actual working time of the personnel employed in any capacity, either on deck, in the engine room, in the general service, or in the wireless service, is fixed at 40 hours per week. In ocean or coastwise traffic the 8-hour 5-day week is to be effective. When the operation of the vessel does not permit the granting of the 2 days of rest when they are due, a compensative rest is to be granted independently of the weekly day of rest provided in the maritime code. Tugs, pilot boats, etc., and vessels making crossings of less than 12 hours are to be in general on the 8-hour 5-day week. For dredges and tugs, etc., the 40 hours are to be averaged over a longer period of time.

In hotels and restaurants the decree provided for 46 hours of presence for cooks and 52 hours for other employees. Because of the intermittent character of the work these hours are considered to be the equivalent of 40 hours of work. In establishments with more than 2 employees and in towns of more than 80,000 inhabitants working time must be distributed over 5 days. Until December 31, the maximum time on duty may be extended to 50 hours per week for cooks and 56 hours for other employees.

The 40-hour week was in effect in the following industries by the middle of June 1937, according to information contained in reports from Addison E. Southard, American Consul General, Paris, dated April 26 and June 10, 1937, and in various French publications:

Underground coal mines.	Underground work in slate pits.
Underground potash mines.	Chemical industries.
Surface services in coal mines.	Hides and skins.
Bakeries:	Clothing industries.
Departments of Seine and Seine-et-Oise.	Sausage manufacture and pork slaughtering.
Department of Seine-et-Marne.	Underground bituminous-schist mines.
Department of Gironde.	Surface work in bituminous-schist mines.
Other Departments.	Galvanoplasty, wires, lamps, etc.
Metallurgy and metal works. ⁶	Hospitals.
Underground iron, metals, and asphalt mines.	Lumber industry.
Surface work in metal mines.	Paper and cardboard industries.
Building and public works.	Banks, insurance offices.
Textile industries.	Retail trade in goods other than food-stuffs.
Book-publishing industries.	Gas and electricity.
Railroads, principal systems.	Retail food stores. ⁷
Glass works.	China and porcelain factories.
Freight handling in ports.	Land transportation.
Laundry and dry-cleaning industries.	Wholesale and semiwholesale trade.
Surface work in slate pits.	

⁶ 42 hours per week in the iron and steel industry.

⁷ 46 hours per week.

Sugar refineries and alcohol distilleries, breweries, etc.	Biscuit, confectionery, chocolate factories, preserved fruits, vegetable canneries, etc.
Industrial-alcohol manufacture.	
City and suburban street railways, motorbuses.	Pastry shops in the Departments of Seine, Seine-et-Oise, and Seine-et-Marne.
Railroads of metropolitan Paris.	
Railways, secondary general systems and local systems.	Private offices, administrative services, and similar agencies.
Milling industry.	Port workers (Nice).
Quarries.	Hotels and restaurants. ⁸
Ice plants.	French merchant marine.
Bleaching and dyeing, and cleaning plants.	Retail pharmacies.
	Newspapers.

⁸ 46 hours of presence for cooks, 52 hours for others.



MINIMUM-WAGE POLICY IN THE PHILIPPINES

MINIMUM-WAGE rates for various classes of governmental and nongovernmental workers have recently been provided for by the Philippine Government.¹ Under Act No. 37 of 1936 of the National Assembly of the Island, the requisite appropriations were made for the application of Executive orders fixing minimum wages for employees and laborers of the National Government. The minimum wage for employees was fixed at 30 pesos² per month, and the minimum wage rates for able-bodied common laborers in the different Provinces and charter cities at 20 percent above the basic minimum wage of such laborers in effect previous to the date of the order.

When laborers are employed on work in isolated or unsettled sections, the Government at its own expense shall supply them with the usual rations, or shall pay an additional wage of not more than 15 centavos³ per day in lieu of such rations.

Whenever conditions in any private industry or in any locality in the Philippines warrant, the President of the Commonwealth may direct the Court of Industrial Relations to conduct an investigation with a view to establishing minimum wages for laborers or maximum rentals for tenants. "If so instructed, the Court is to make a tentative decision, which will be open to objection by any of the parties for 45 days after publication. Any objections made in this interval will be examined by the Court, the final decisions of which are to become binding on all concerned."

The Secretary of Labor of the Commonwealth having received reliable information that the wages of laborers and shares of tenants in certain sugar-producing sections of the Philippines were insufficient

¹ Commonwealth of the Philippines, Official Gazette, Sept. 1 (p. 1641), and Sept. 12 (p. 1723), 1936, and Jan. 30 (p. 204), 1937; International Labor Office, Industrial and Labor Information, Geneva, Apr. 5 (p. 6), and May 24 (p. 326), 1937.

² Peso=50 cents in U. S. currency.

³ Centavo=one-half cent in U. S. currency.

to supply the reasonable needs of such laborers and tenants and were disproportionate to the profits received by the landlords and landowners in such section, the President of the Islands, on January 22, 1937, in an administrative order (No. 32) directed the Court of Industrial Relations to conduct an investigation at once of all pertinent facts concerning the sugar industry and "to determine the necessity and fairness of fixing and adopting a minimum wage or share for laborers and tenants working in the sugar-producing areas."

In another administrative order of the same date (No. 33), the President directed the Court of Industrial Relations to make immediately an investigation and examination of facts pertaining to the cigar and cigarette industry, and to determine the necessity and fairness of establishing a minimum wage for laborers employed in cigar and cigarette factories.



MINIMUM-WAGE LAW OF YUGOSLAVIA¹

A NEW labor law providing for a minimum wage and for the legalization of collective agreements was promulgated in the Official Gazette of Yugoslavia on February 13, 1937. The law became effective 60 days thereafter.

While the minimum wage provided by the law is only 16 dinars² per 8-hour working day, the average wage is expected to be considerably higher, probably around 23 or 24 dinars a day. In December 1936 the average daily wage was 21.80 dinars. Of the 635,499 wage earners insured in December 1936, about 14 percent had a daily wage of 8 dinars or less, 46 percent from 8 to 24 dinars, 17 percent from 24 to 34 dinars, 11 percent from 34 to 48 dinars, and 12 percent a daily wage above 48 dinars.

Minimum wage.—The law fixes the minimum basic wage at 2 dinars per hour. In the case of wage earners working less than 8 hours a day, an 8-hour basic wage is to be taken as a basis. The wage of young workers up to 18 years of age may not be less than 75 percent of the minimum wage for adult workers.

If the wage scale established by a collective agreement between the workers and their employers is more favorable than the legal basic wage, the law is not applicable in such cases. All wage scales lower than the legal basic wage, established by either individual or collective agreement, are void. Piece work, when not absolutely necessary and not favorable to the wage earners, is to be replaced by time work.

Collective agreements.—The law provides that a collective agreement may be made either for a single enterprise or for an entire industry or

¹ Data are from report of Charles S. Wilson, of the American Legation at Belgrade, Mar. 4, 1937.

² Average exchange rate of dinar in February 1937 = 2.3 cents.

occupation. National agreements are to be made between the corresponding labor unions and employers' associations.

In cases where there is no regular organization of the employers, the law requires that such an organization be formed for the purpose of making trade agreements.

In cases of double or multiple agreements covering the same fields, the agreement most favorable to the workers is considered to be valid.

If the term of the agreement is not specified, the agreement is to be binding for at least one-half year.

A collective agreement concluded with several enterprises in a certain industry or occupation may be extended by the proper government authorities to cover the entire industry or occupation in the territory under their jurisdiction, provided such agreement covers more than one-half of the establishments in the industry or occupation and at least one-half of all the workers in the territory engaged in that industry or occupation.

In the absence of a collective agreement, if more than one-half of the workers engaged in one industry or occupation in the territory, or more than one-half of all establishments engaged in that industry or occupation demand such an agreement, the competent government authorities within that territory are to invite both parties to make an agreement within a specified time. If no agreement is arrived at, the government authorities may fix wages for the workers, such wages to be obligatory for all persons employed in that industry or occupation within the territory. These compulsory wages may be more favorable to the workers than the minimum wages fixed by this law.

Penalties.—A fine of from 100 to 10,000 dinars shall be imposed upon employers who do not pay the minimum wage, or who violate the provisions concerning collective trade agreements. Workers who violate the provisions of this law shall be fined from 100 to 500 dinars.

CHINESE MINIMUM-WAGE ACT

ON DECEMBER 23, 1936, a minimum-wage law was promulgated in China.¹ The law is applicable by the proper authority to all or a part of the workers employed by any industrial enterprise in which the wage is not determined by collective agreement and is regarded as particularly low. The "proper authority" is defined in the law as the municipal government in a municipality and the hsien (district) government in a hsien, unless otherwise indicated.

¹ China. Ministry of Industry. Bureau of Foreign Trade. Chinese Economic Journal and Bulletin, Shanghai, February 1937 (pp. 184-187): Minimum Wage Law.

The minimum-wage rate is to be based on local conditions and cost of living of the workers, as follows:

(1) The standard for determining the minimum wage for an adult worker shall be based on an amount sufficient for the maintenance of the living of the worker himself and of two of his relatives who are unable to work;

(2) The minimum wage for a child worker shall not be less than half of the wage for an adult worker.

Under the law (art. 4), no wage contract shall be agreed upon between the employer and the workers concerned, either personally or through their organizations, providing for a wage below the minimum rate; wages below that rate shall be increased to that minimum except in cases in which there is a collective agreement which has received the approval of the proper authority.

It is provided that wages for partially physically disabled workers who are capable of performing a certain amount of work may be fixed at a rate below the minimum, if this rate is approved by the proper authority.

The law provides (art. 6) that in determining the minimum-wage rate, the amount of work performed during the day shall be taken as the basis; the average value of free board and lodging furnished workers may be included as part of the wage. Bonuses or allowances paid by the employer according to agreement and pay for overtime work are not to be considered a part of the employee's wages.

When the proper authority holds that it is necessary to determine a minimum-wage rate for all or some of the employees of a certain industrial enterprise, it may, after obtaining the opinions of both the employers and the workers of the establishment concerned, fix a minimum-wage rate through a minimum-wage committee, and submit this rate, through the higher proper authority, to the Ministry of Industry for record and announcement.

The membership of the minimum-wage committee, as set forth in the law (art. 8), shall be as follows: (1) One to two persons representing the proper authority; (2) three to five persons each representing the employer and the workers of the enterprise concerned; (3) one person each delegated by the employer and the workers of the enterprise concerned; this person must have no direct relation with the parties concerned; and (4) one representative appointed by the Ministry of Industry or by the Provincial authority, when it is deemed necessary.

The names of the members of the minimum-wage committee are to be submitted to the Ministry of Industry for record.

The representative of the proper authority shall serve as the chairman of the minimum-wage committee except when one of the members of the committee has been appointed by the Ministry of

Industry or the Provincial authority, in which case this member is to be the chairman.

No salaries are to be paid to the members of the minimum-wage committee, but the delegates of the employer and the workers provided for in the law may receive allowances.

The minimum-wage rate shall be effective for 12 months and may be amended after the close of this period.

Violation by employers of the provisions of articles 4 and 6 is punishable by a fine of not to exceed 100 yuan. A fine of not to exceed 50 yuan may be imposed upon an employer who refuses to allow inspection of his books or documents in regard to wages, or who does not post the legal minimum-wage rates in conspicuous places on the premises, or who refuses to keep records covering workers employed on jobs outside the employer's premises, as required by the law.

The enforcement of this law is to be made effective by a special decree.

Workers' Education

EDUCATION PROGRAM OF WORKS PROGRESS ADMINISTRATION

OVER 2,000,000 persons were enrolled in regular classes in March 1937 under the education program of the Works Progress Administration. A million more persons took part through attendance at meetings other than regular classes. The number of needy teachers and other workers given employment was 42,263. In the various fields of adult education, and in nursery schools, 139,756 classes were conducted.

These statistics and other data regarding the education program are included in a press release of May 23, 1937,¹ reviewing a report of the Director of the Education Division of the Works Progress Administration.

During the past 3 years, according to Administrator Hopkins, not less than 4,000,000 adults in the United States have raised themselves to higher educational levels through the services of the W. P. A. program. The experience of the last 4 years under F. E. R. A. and W. P. A. has demonstrated that adults are eager to learn, as 4 or 5 millions have voluntarily attended classes. The granting of relief did not depend upon such attendance. "They wanted information and new skills to meet modern conditions that are ever becoming more complex, and where special knowledge and experienced skill is absolutely necessary to enable them to make a living in this highly mechanized age."

The W. P. A. education program is broad in scope, providing not only for the care of preschool children in nursery schools, but also for evening classes for parents, where homemaking, hygiene, and child welfare are stressed.

The general adult-education program is formulated with a view to the needs of tens of thousands of men and women who were unable to continue school in early life. For these people courses in creative writing, art, music, parliamentary practice, first aid and Braille reading for the blind are offered, in addition to subjects usually taught in grammar and high schools. About 700,000 adults have been taught to read and write in W. P. A. literacy classes, over 200,000 pupils being enrolled at a time.

Vocational education has also been an outstanding activity in the program. The great majority of relief clients are unskilled workers,

¹ With certain revisions by Works Progress Administration.

and in March 1937 over 200,000 persons were being trained for positions requiring some degree of skill.

Classes for workers have been set up in every industrial section of the United States. The history of organized labor and the economic problems of the labor movement are being given intensive study by some 50,000 workers. In March 1937 nearly 70,000 persons were enrolled in 3,977 workers' classes, and over 60,000 fathers and mothers from low-income groups in rural, mining, and closely populated industrial districts were availing themselves of parent education. A national advisory committee, including representatives of national associations such as the American Association of University Women and the National Congress of Parents and Teachers, has cooperated with the Works Progress Administration in the development of this parent-education program.

Freshman college courses have been conducted for young men and women whose hopes for a college education were blasted when the depression caused parents to retrench in their spending. Correspondence-school centers in a score of States have provided additional educational advantages to more than 15,000 persons. Miscellaneous educational projects have appealed to more than 200,000 men and women in approximately 11,000 classes.

Under the program of the Works Progress Administration, educational projects are conducted with the cooperation of State boards of education and local educational authorities. Schoolrooms are provided by the localities, and the pay roll of employees is met by the Federal Government. In some instances—in New York State, for example—the State and the locality jointly meet the cost of food for the nursery schools. In other instances the locality provides the food.

The accompanying tables record the enrollments by classes and by States:

TABLE 1.—*Number Employed and Student Enrollment in W. P. A. Education Program, by States, March 1937*

State	Total em-ployees	Teachers	Super-visors	Other em-ployees	Classes	Enrollees
Alabama	698	504	6	98	1,173	18,562
Arizona	273	205	15	53	347	6,029
Arkansas	261	250	10	1	1,403	14,945
California	1,851	1,433	143	275	16,801	143,621
Colorado	484	350	30	104	1,141	16,864
Connecticut	498	338	19	141	910	9,337
District of Columbia	250	155	11	84	395	74,993
Delaware	51	18	6	27	25	184
Florida	588	438	24	126	885	9,411
Georgia	794	673	28	93	1,439	25,578
Idaho	220	124	5	91	493	6,083
Illinois	2,035	1,243	112	680	3,911	65,535
Indiana	667	573	19	75	1,524	27,585
Iowa	215	174	3	38	532	7,639
Kansas	805	703	24	78	1,703	21,430
Kentucky	990	820	59	111	2,820	35,152
Louisiana	903	789	55	59	3,552	37,092
Maine	137	108	3	26	171	2,227
Maryland	211	180	7	24	383	10,374
Massachusetts	1,015	793	31	191	1,377	32,946
Michigan	648	427	27	194	2,601	23,833
Minnesota	436	355	17	64	1,287	25,194
Mississippi	787	773	2	12	2,305	37,060

**TABLE 1.—Number Employed and Student Enrollment in W. P. A. Educational Program,
by States, March 1937—Continued**

State	Total employees	Teachers	Supervisors	Other employees	Classes	Enrollees
Missouri	616	522	24	70	1,525	30,994
Montana	166	120	5	41	236	5,012
Nebraska	417	228	8	181	1,034	10,576
Nevada	37	27	1	9	44	681
New Hampshire	93	70	4	19	209	4,420
New Jersey	1,253	1,088	19	146	1,375	28,262
New Mexico	164	150	8	6	319	4,127
New York State	2,917	2,143	150	624	7,645	86,841
New York City	8,727	5,625	287	2,815	14,451	174,529
North Carolina	677	602	61	14	3,084	26,481
North Dakota	295	191	10	94	336	14,406
Ohio	1,703	1,484	91	128	4,580	82,743
Oklahoma	285	239	5	41	727	12,152
Oregon	318	277	12	29	836	13,220
Pennsylvania	3,026	2,459	249	318	34,359	576,483
Rhode Island	234	162	4	68	695	8,393
South Carolina	733	680	48	5	5,101	29,144
South Dakota	517	196	6	315	453	7,343
Tennessee	586	504	33	49	1,709	30,268
Texas	1,557	1,382	104	71	3,006	51,519
Utah	214	162	15	37	411	6,840
Vermont	110	103	4	3	1,167	13,689
Virginia	717	594	70	53	1,301	26,050
Washington	598	534	60	4	4,651	69,925
West Virginia	847	684	68	95	1,662	29,652
Wisconsin	540	416	8	116	1,272	25,623
Wyoming	89	58	4	27	210	3,469
Total	42,253	32,216	2,014	8,023	139,756	2,024,525

**TABLE 2.—Number of Employees, Classes, and Enrollment in W. P. A.
Education Program, by Classes, March 1937**

Classes	Number of teachers and other employees	Number of classes	Number of persons enrolled
Literacy	6,004	22,770	241,048
Workers' education	731	3,977	69,436
Public affairs education	392	2,200	40,501
Parent education	701	4,067	66,267
Homemaking education	2,102	9,029	107,141
Vocational education	3,878	15,667	206,297
Education in avocational and leisure-time activities	3,361	35,641	646,770
College-level instruction	597	873	15,747
Correspondence instruction	355	736	23,409
Other general adult education	7,477	30,557	394,628
Nursery schools	6,330	1,797	52,050
Other assignments	10,325	12,433	161,231
Total	42,253	139,756	2,024,525

Industrial Disputes

TREND OF STRIKES

PRELIMINARY estimates of strikes in April and May 1937 indicate a slight increase in the number of strikes in May as compared with April and a substantial increase (60 percent) in the number of workers involved. This increase was accounted for principally by the large strike against four independent steel companies which began late in May. There was a slight decrease in the number of man-days idle in May as compared with April. The large number of man-days idle in April was due in part to the large automobile strikes which began in March and continued during the early part of April. While the steel strike, which was called on May 26, involved a relatively large number of workers, it began too late in the month to accumulate a large number of man-days of idleness.

Trend of Strikes, January 1936 to May 1937¹

Year and month	Number of strikes					Workers involved in strikes		Man-days idle during month or year
	Continued from preceding month	Beginning in month or year	In progress during month	Ended in month	In effect at end of month	Beginning in month or year	In progress during month	
1936								
Total for year		2,172				788,648		13,901,956
January	84	167	251	149	102	32,406	59,153	635,519
February	102	148	250	131	119	63,056	89,735	748,491
March	119	185	304	174	130	75,191	122,162	1,331,162
April	130	183	313	179	134	65,379	95,526	699,900
May	134	206	340	219	121	72,824	123,030	1,019,171
June	121	188	309	158	151	63,429	133,531	1,327,678
July	151	173	324	197	127	38,017	125,281	1,105,480
August	127	228	355	210	145	68,752	118,268	911,216
September	145	234	379	236	143	65,994	130,875	1,063,100
October	143	192	335	219	116	100,845	148,570	1,063,878
November	116	136	252	126	126	70,116	157,007	1,940,628
December	126	132	258	158	100	72,639	184,859	2,065,733
1937								
January	100	162	262	127	135	106,514	212,161	2,690,552
February	135	199	334	197	137	107,055	232,638	1,482,199
March	137	581	718	483	235	281,887	343,043	3,160,519
April ¹	235	480	715	430	285	180,000	330,000	3,200,000
May ¹	285	495	780	460	320	290,000	400,000	3,125,000

¹ Strikes involving fewer than 6 workers or lasting less than 1 day are not included in this table, nor in the following tables. Notices or leads regarding strikes are obtained by the Bureau from 670 daily papers, labor papers, and trade journals, as well as from all Government labor boards. Letters are written to representatives of parties in the disputes ask-

ing for detailed and authentic information. Since answers to some of these letters have not yet been received, the figures given for the late months are not final. This is particularly true with regard to figures for the last 2 months, and these should be considered as preliminary estimates. (See footnote on following page concerning March figures.)

As compared with May a year ago, the estimates for May 1937 indicate increases of 140 percent in number of strikes, nearly 300 percent in number of workers involved, and 200 percent in man-days of idleness.

These preliminary estimates are based on scattered information from newspapers and other sources and are subject to revision as more definite reports are received. An analysis of strikes in May 1937, based on detailed and verified information, will appear in the September issue of the *MONTHLY LABOR REVIEW*.



ANALYSIS OF STRIKES IN MARCH 1937

DETAILED information has been obtained by the Bureau of Labor Statistics on 581 strikes¹ which began in March, in which 281,887 workers were involved. There were 137 strikes which continued into March from preceding months, making a total of 718 in progress during the month, in which 343,043 workers were involved. These resulted in more than 3,000,000 man-days of idleness during March.

The textile industries, with 98, experienced more strikes during the month than any other industry group, although the number of strikes in several other industries was unusually high. There were 45 in iron and steel, 41 in trade, 38 each in the lumber and in the domestic- and personal-service industries, 36 in the machinery-manufacturing industries, 34 each in transportation and communication and in building and construction.

Over 100,000 workers lost almost 1½ million days' work because of strikes in the automobile industry.

TABLE 1.—Strikes in March 1937, by Industry

Industry	Beginning in March		In progress dur- ing March		Man- days idle during March
	Num- ber	Workers involved	Num- ber	Workers involved	
All industries.....	581	281,887	718	343,043	3,160,519
Iron and steel and their products, not including machinery.....	45	11,934	52	14,017	128,143
Blast furnaces, steel works, and rolling mills.....	9	833	10	948	6,291
Bolts, nuts, washers, and rivets.....	3	3,317	3	3,317	54,206
Cast-iron pipe and fittings.....	3	757	3	757	8,197
Cutlery (not including silver and plated cutlery) and edge tools.....	2	836	3	1,056	6,824
Forgings, iron and steel.....	2	441	2	441	957
Hardware.....	7	2,038	9	3,008	26,074
Plumbers' supplies and fixtures.....	1	450	1	450	900
Steam and hot-water heating apparatus and steam fit- tings.....	2	977	2	977	3,668

¹ Detailed information on some strikes has not yet been received. (See footnote to preceding table.) When final reports have been received, the total for the month will probably exceed 600. Data on these missing strikes will be included in the annual report.

TABLE 1.—*Strikes in March 1937, by Industry—Continued*

Industry	Beginning in March		In progress dur- ing March		Man- days idle during March
	Num- ber	Workers involved	Num- ber	Workers involved	
Iron and steel and their products—Continued.					
Stoves	4	1,048	5	1,474	11,440
Tools (not including edge tools, machine tools, files, and saws) (hand tools)	5	159	6	221	844
Wirework	1	35	1	35	350
Other	6	1,043	7	1,243	8,392
Machinery, not including transportation equipment	36	9,911	44	12,000	132,591
Agricultural implements	1	195	1	195	585
Electrical machinery, apparatus, and supplies	12	4,883	15	5,384	60,146
Foundry and machine-shop products	12	2,384	14	2,619	17,408
Radios and phonographs	6	1,827	6	1,827	14,826
Other	5	622	8	1,975	30,626
Transportation equipment	20	110,143	31	125,060	1,459,399
Aircraft			2	6,742	12,720
Automobiles, bodies, and parts	17	109,305	23	116,455	1,439,404
Cars, electric- and steam-railroad	1	750	1	750	1,500
Shipbuilding	1	60	4	1,085	5,635
Other	1	28	1	28	140
Railroad repair shops	1	24	1	24	48
Electric railroad	1	24	1	24	48
Nonferrous metals and their products	17	5,361	20	6,762	87,171
Aluminum manufactures	1	3,000	1	3,000	45,000
Brass, bronze, and copper products	2	278	2	278	2,312
Clocks and watches and time-recording devices			1	981	13,734
Jewelry	2	46	2	46	112
Lighting equipment	5	560	6	790	15,588
Stamped and enameled ware	5	1,235	5	1,235	4,425
Other	2	242	3	432	6,000
Lumber and allied products	38	10,021	41	10,274	81,893
Furniture	15	3,051	18	3,304	28,424
Millwork and planing	6	850	6	850	5,119
Sawmills and logging camps	5	3,941	5	3,941	25,472
Other	12	2,179	12	2,179	22,878
Stone, clay, and glass products	13	3,881	14	3,966	18,240
Brick, tile, and terra cotta	4	455	4	455	1,886
Glass	3	1,900	4	2,075	9,195
Marble, granite, slate, and other products	2	158	2	158	3,498
Other	4	1,278	4	1,278	3,661
Textiles and their products	98	26,594	137	38,740	380,291
Fabrics:					
Cotton goods	3	1,394	4	1,925	24,453
Cotton small wares	2	885	2	885	2,501
Dyeing and finishing textiles	2	73	5	730	8,116
Silk and rayon goods	10	3,346	12	3,788	22,078
Woolen and worsted goods	4	1,896	6	2,977	34,133
Other	4	531	7	773	3,980
Wearing apparel:					
Clothing, men's	16	2,305	19	2,991	24,981
Clothing, women's	23	2,402	32	4,004	27,637
Corsets and allied garments	2	535	3	815	2,890
Men's furnishings	3	519	4	578	2,070
Hats, caps, and millinery	3	189	3	189	940
Shirts and collars	4	947	9	2,412	21,877
Hosiery	8	9,530	15	14,453	187,923
Knit goods	6	555	7	598	4,402
Other	8	1,487	9	1,622	12,310
Leather and its manufactures	29	10,774	33	23,750	67,565
Boots and shoes	22	9,116	23	20,616	43,823
Leather	1	601	1	601	5,409
Other leather goods	6	1,057	9	2,533	18,333
Food and kindred products	22	4,638	33	5,594	33,784
Baking	5	413	9	783	5,406
Beverages			1	18	306
Canning and preserving	2	374	4	679	6,217
Confectionery	4	1,332	5	1,342	3,663
Flour and grain mills	2	293	2	293	1,110
Slaughtering and meat packing	1	450	2	635	5,420
Sugar refining, cane	2	865	2	865	7,120
Other	6	911	8	979	4,542
Tobacco manufactures	6	1,866	7	3,866	46,235
Cigars	6	1,866	7	3,866	46,235
Paper and printing	26	5,448	29	5,783	30,821
Boxes, paper	8	1,580	8	1,580	10,384
Paper and pulp	1	180	1	180	360
Printing and publishing:					
Book and job	5	1,489	5	1,489	13,582
Newspapers and periodicals	4	732	5	738	12,119
Other	8	1,467	10	1,796	14,376

TABLE 1.—*Strikes in March 1937, by Industry—Continued*

Industry	Beginning in March		In progress dur- ing March		Man- days idle during March
	Num- ber	Workers involved	Num- ber	Workers involved	
Chemicals and allied products.					
Druggists' preparations.	7	1,590	7	1,590	5,980
Paint and varnishes.	1	75	1	75	150
Petroleum refining.	1	22	1	22	308
Rayon and allied products.	2	104	2	104	1,504
Other.	1	1,200	1	1,200	3,600
Rubber products.					
Rubber tires and inner tubes.	2	189	2	189	418
Other rubber goods.	5	10,891	6	12,129	217,137
Miscellaneous manufacturing.					
Electric light, power, and manufactured gas.	2	637			2,022
Broom and brush.	1	100	1	100	900
Furriers and fur factories.	1	95	1	95	380
Other.	27	5,249	32	6,595	33,741
Extraction of minerals.					
Coal mining, anthracite.	8	2,467	10	6,687	16,137
Coal mining, bituminous.	4	1,650	5	5,820	12,890
Metaliferous mining.	2	379	2	379	813
Quarrying and nonmetallic mining.	2	438	2	438	1,504
Transportation and communication.					
Water transportation.	34	14,382	41	15,272	116,900
Motor transportation.	3	2,106	6	2,549	12,284
Electric railroad.	11	6,636	14	6,792	43,206
Telephone and telegraph.	2	600	2	600	3,000
Motorbus transportation.	8	603	8	603	1,384
Taxicabs and miscellaneous.	5	309	6	600	1,568
Trade.					
Trade—Wholesale.	41	17,403	50	18,324	85,914
Trade—Retail.	6	4,499	10	5,076	39,130
Domestic and personal service.					
Hotels, restaurants, and boarding houses.	35	12,904	40	13,248	46,784
Personal service, barbers, beauty parlors.	38	6,705	44	8,647	40,191
Laundries.	17	3,213	18	3,340	10,665
Dyeing, cleaning, and pressing.	3	119	4	146	246
Elevator and maintenance workers (when not attached to specific industry).	10	2,789	14	4,577	23,618
4	292	4	292	3,642	
Professional service.					
Recreation and amusement.	7	1,317	7	1,317	3,572
Professional.	3	1,048	3	1,048	2,888
Semiprofessional, attendants, and helpers.	1	57	1	57	627
Building and construction.					
Buildings, exclusive of P. W. A.	34	5,095	45	5,641	66,562
All other construction (bridges, docks, etc., and P. W. A. buildings).	22	3,728	26	4,080	57,609
Agriculture, etc.					
Agriculture.	12	1,367	19	1,561	8,953
Fishing.	6	256	7	377	1,641
W. P. A., relief, and resettlement projects.	4	216	5	337	1,441
Other nonmanufacturing industries.	2	40	2	40	200
	11	14,205	12	14,238	93,158
	10	1,537	11	1,548	9,803

Nearly 60 percent of the 581 strikes beginning in March were in 5 States. There were 84 in Pennsylvania, 76 in Illinois, 74 in Michigan, 57 in New York, and 48 in Ohio. By far the greatest number of workers involved and man-days of idleness were in the State of Michigan. This is accounted for principally by the large automobile strikes in progress during the month.

As indicated at the end of table 2, there were 13 strikes in progress during March which extended into 2 or more States. The largest of these was a short strike at plants of the Chicago Mill & Lumber Co. in Greenville, Miss., and Helena, Ark.

TABLE 2.—*Strikes in March 1937, by States*

State	Beginning in March		In progress during March		Man-days idle during March
	Number	Workers involved	Number	Workers involved	
	581	281,887	718	343,043	
All States					3,160,519
Alabama	3	609	5	1,632	18,695
California	24	7,245	38	15,594	52,909
Colorado	1	100	2	144	1,032
Connecticut	25	3,315	27	4,115	31,414
Delaware	3	750	3	750	6,050
District of Columbia	2	203	3	222	1,450
Florida	2	243	2	243	1,203
Georgia	2	87	3	618	14,574
Illinois	76	19,926	82	22,179	144,261
Indiana	13	3,429	16	3,537	21,987
Iowa	4	437	4	437	1,710
Kentucky	6	1,183	6	1,183	10,007
Maine	1	4,000	1	4,000	9,400
Massachusetts	31	6,783	34	18,697	38,411
Michigan	74	127,214	91	137,826	1,637,036
Minnesota	10	1,985	12	2,635	17,427
Mississippi	2	520	2	520	2,270
Missouri	12	4,762	15	5,161	60,747
Montana	2	1,765	3	1,791	9,201
Nevada	1	38	1	38	304
New Hampshire	2	283	2	283	2,662
New Jersey	19	2,927	27	3,841	31,429
New York	57	10,202	73	13,066	92,657
North Carolina	2	166	2	166	650
Ohio	48	27,976	63	30,143	383,623
Oregon	3	237	6	912	5,170
Pennsylvania	84	30,045	106	40,724	364,371
Rhode Island	21	13,652	24	14,727	65,807
Tennessee	11	1,543	12	2,043	12,630
Texas	5	911	6	946	6,841
Vermont	2	96	2	96	258
Virginia	4	1,294	4	1,294	4,604
Washington	9	3,755	13	4,215	66,195
West Virginia	1	24	1	24	168
Wisconsin	10	959	14	4,853	13,161
Interstate	9	3,223	13	4,388	30,115

About 11 percent of the strikes beginning in March involved fewer than 20 workers each and about 47 percent involved fewer than 100 workers each. The average number of workers involved was 485. Only in 4 strikes were as many as 10,000 workers involved. Three of these were in the automobile industry in Michigan and the other was a strike of rubber workers in Akron, Ohio. (See table 3.)

TABLE 3.—*Strikes Beginning in March 1937 Classified by Number of Workers Involved*

Industry group	Total	Number of strikes in which the number of workers involved was—						
		6 and under 20	20 and under 100	100 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and over
All industries	581	65	208	223	42	35	4	4
<i>Manufacturing</i>								
Iron and steel and their products, not including machinery	45	4	16	19	5	1		
Machinery, not including transportation equipment	36	1	10	20	4	1		
Transportation equipment	20	1	4	3	2	6	1	3
Railroad repair shops	1		1					
Nonferrous metals and their products	17	1	7	8	0	1		

TABLE 3.—*Strikes Beginning in March 1937 Classified by Number of Workers Involved—Continued*

Industry group	Total	Number of strikes in which the number of workers involved was—						
		6 and under 20	20 and under 100	100 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000	10,000 and over
Manufacturing—Continued								
Lumber and allied products	38	1	13	19	3	2		
Stone, clay, and glass products	13	2	2	6	1	2		
Textiles and their products	98	7	46	33	10	1	1	
Leather and its manufactures	20		8	16	4	1		
Food and kindred products	22		7	14	1			
Tobacco manufactures	6		1	4	1			
Paper and printing	26	1	11	11	2	1		
Chemicals and allied products	7		5	1		1		
Rubber products	5		2	2				1
Miscellaneous manufacturing	29	3	10	14	1	1		
Nonmanufacturing								
Extraction of minerals	8	1	1	5	1			
Transportation and communication	34	9	9	8	4	4		
Trade	41	11	13	11	1	4	1	
Domestic and personal service	38	10	14	11		3		
Professional service	7	2	2	2		1		
Building and construction	34	6	18	8	1	1		
Agriculture, etc.	6	3	2	1				
W. P. A., relief, and resettlement projects	11	1	2	3		4	1	
Other nonmanufacturing industries	10	1	4	4	1			

Recognition and other union organization matters were the major issues in 48 percent of the 581 strikes beginning in March. Some of the larger strikes were in this group, as indicated by the fact that the group included 66 percent of the total number of workers. Wages and hours were the major issues in 43 percent of the strikes, which included 27 percent of the workers. In 8 percent of the strikes, including about 7 percent of the workers, the major issues were jurisdiction and various grievances and demands which could not properly be classified in the other major groups.

TABLE 4.—*Major Issues Involved in Strikes Beginning in March 1937*

Major Issues	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
All issues	581	100.0	281,887	100.0
Wages and hours	252	43.4	76,823	27.3
Wage increase	179	30.8	58,665	20.8
Wage decrease	4	.7	3,303	1.2
Wage increase, hour decrease	65	11.2	14,137	5.0
Hour decrease	4	.7	718	.3
Union organization	281	48.3	186,049	66.0
Recognition	39	6.7	82,389	29.3
Recognition and wages	76	13.1	27,534	9.8
Recognition and hours	2	.3	80	(1)
Recognition, wages and hours	117	20.1	62,321	22.1
Closed shop	26	4.5	6,745	2.4
Violation of agreement	4	.7	674	.2
Discrimination	17	2.9	6,306	2.2
Miscellaneous	48	8.3	19,015	6.7
Sympathy	2	.3	598	.2
Rival unions or factions	5	.9	1,770	.6
Jurisdiction	3	.5	82	(1)
Other	35	6.1	16,022	5.7
Not reported	3	.5	543	.2

¹ Less than one-tenth of 1 percent.

The strikes which ended in March are classified in table 5 according to industry group and length of duration. The average duration of these 483 strikes was just a little more than 10 calendar days. About 55 percent of them lasted less than a week and an additional 24 percent were terminated in less than one-half month after they began. Nine of the 483 strikes had been in progress for 3 months or more. All of these were small strikes, none of them involving as many as 500 workers.

TABLE 5.—*Duration of Strikes Ending in March 1937*

Industry group	Total	Number of strikes with duration of—					
		Less than 1 week	1 week and less than $\frac{1}{2}$ month	$\frac{1}{2}$ and less than 1 month	1 and less than 2 months	2 and less than 3 months	3 months or more
All industries	483	270	116	58	27	3	9
<i>Manufacturing</i>							
Iron and steel and their products, not including machinery	38	27	3	8	—	—	—
Machinery, not including transportation equipment	33	17	8	4	2	—	2
Transportation equipment	21	12	3	5	—	—	1
Nonferrous metals and their products	10	4	3	2	1	—	—
Lumber and allied products	26	10	9	5	—	1	1
Stone, clay, and glass products	9	8	1	—	—	—	—
Textiles and their products	85	39	23	7	12	—	4
Leather and its manufactures	19	6	8	5	—	—	—
Food and kindred products	18	12	—	4	2	—	—
Tobacco manufactures	6	5	1	—	—	—	—
Paper and printing	20	14	3	3	—	—	—
Chemicals and allied products	3	3	—	—	—	—	—
Rubber products	4	1	2	—	1	—	—
Miscellaneous manufacturing	28	16	6	4	2	—	—
<i>Nonmanufacturing</i>							
Extraction of minerals	7	5	2	—	—	—	—
Transportation and communication	35	24	4	3	3	1	—
Trade	35	20	12	2	1	—	—
Domestic and personal service	33	19	10	1	2	—	1
Professional service	5	4	1	—	—	—	—
Building and construction	28	10	13	3	1	1	—
Agriculture, etc.	4	1	3	—	—	—	—
W. P. A., relief, and resettlement projects	8	5	1	2	—	—	—
Other nonmanufacturing industries	8	8	—	—	—	—	—

Half of the strikes ending in March, including an equal proportion of the workers involved, were settled directly by the employers and representatives of the organized workers. In 24.0 percent of the strikes, including 26.5 percent of the workers, settlements were negotiated with the assistance of Government conciliators or labor boards. In most of these cases the workers were represented by union officials. As shown in table 6, there were 7.5 percent of the strikes, including nearly 10 percent of the workers, which were terminated without any formal settlements. In most of these cases the workers simply returned to work without settlements or they lost their jobs when the employers hired new workers to fill their places or went out of business.

**TABLE 6.—Methods of Negotiating Settlements of Strikes
Ending in March 1937**

Negotiations toward settlements carried on by—	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total.....	483	100.0	181,046	100.0
Employers and workers directly.....	81	16.8	16,061	8.9
Employers and representatives of organized workers directly.....	242	50.1	90,057	49.7
Government conciliators or labor boards.....	116	24.0	47,891	26.5
Private conciliators or arbitrators.....	7	1.4	9,095	5.0
Terminated without formal settlement.....	36	7.5	17,897	9.7
Not reported.....	1	.2	345	.2

About 58 percent of the strikes ending in March, including half of the total number of workers involved, resulted in substantial gains to the workers. Approximately 30 percent of the strikes, including one-third of the workers, resulted in partial gains or compromises; and 10 percent of the strikes, including 9 percent of the workers, resulted in little or no gains from the workers' point of view. (See table 7.)

TABLE 7.—Results of Strikes Ending in March 1937

Results	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total.....	483	100.0	181,046	100.0
Substantial gains to workers.....	278	57.6	91,211	50.3
Partial gains or compromises.....	148	30.6	59,924	33.1
Little or no gains.....	50	10.4	16,046	8.9
Jurisdiction, rival union or faction settlements.....	4	.8	120	.1
Indeterminate.....	2	.4	13,400	7.4
Not reported.....	1	.2	345	.2

Results of the strikes ending in March, in relation to the major issues involved, are shown in table 8. The workers won 55 percent of the wage-and-hour strikes as compared with 64 percent of the union-organization strikes. They lost 8 percent of the wage-and-hour strikes and 10 percent of the strikes in which the major issues were union-organization questions. They compromised 36 percent of the first group and 26 percent of the union-organization strikes.

In terms of the number of workers involved, 58 percent of the workers engaged in the wage-and-hour strikes won their demands, as compared with 47 percent of the workers striking over union-organization matters. About 23 percent of the workers in the first group obtained

compromise settlements, as compared with 45 percent in the latter group. Two percent of the workers in the wage-and-hour strikes gained little or nothing as compared with 8 percent in the union-organization strikes.

TABLE 3.—*Results of Strikes Ending in March 1937
in Relation to Major Issues Involved*

Major issues	Total	Strikes resulting in—				
		Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Jurisdiction, rival union or faction settlements	Indeterminate
Number of strikes						
All issues.....	483	278	148	50	4	2
Wages and hours.....	222	123	80	18		1
Wage increase.....	167	93	59	14		1
Wage decrease.....	5	2	2	1		
Wage increase, hour decrease.....	49	27	19	3		
Hour decrease.....	1	1				
Union organization.....	223	142	57	23		1
Recognition.....	26	16	4	6		
Recognition and wages.....	65	40	20	5		
Recognition and hours.....	1		1			
Recognition, wages and hours.....	91	65	23	3		
Closed shop.....	20	14	4	2		
Violation of agreement.....	3	3				
Discrimination.....	17	4	5	7		1
Miscellaneous.....	38	13	11	9	4	1
Sympathy.....	3	2	1			
Rival unions or factions.....	2				2	
Jurisdiction.....	2				2	
Other.....	30	11	10	9		
Not reported.....	1					1
Number of workers involved						
All issues.....	181,046	91,211	59,924	16,046	120	13,400
Wages and hours.....	81,101	47,278	10,023	1,800		13,000
Wage increase.....	69,676	41,476	13,966	1,234		13,000
Wage decrease.....	1,113	123	765	225		
Wage increase, hour decrease.....	9,712	5,079	4,292	341		
Hour decrease.....	600	600				
Union organization.....	84,483	39,843	37,575	6,665		400
Recognition.....	7,858	6,108	1,134	616		
Recognition and wages.....	24,098	7,211	13,243	3,644		
Recognition and hours.....	40		40			
Recognition, wages and hours.....	42,867	24,535	17,555	777		
Closed shop.....	3,099	645	2,304	150		
Violation of agreement.....	585	585				
Discrimination.....	5,936	759	3,299	1,478		400
Miscellaneous.....	15,462	4,090	3,326	7,581	120	345
Sympathy.....	720	678	42			
Rival unions or factions.....	80				80	
Jurisdiction.....	40				40	
Other.....	14,277	3,412	3,284	7,581		
Not reported.....	345					345

**CONCILIATION WORK
OF THE DEPARTMENT OF LABOR
MAY 1937**

DURING May 1937, conciliators of the Department of Labor mediated in 149 disputes, involving directly and indirectly about 193,800 workers. This mediation service was requested by either one or both parties to the disputes. Some of these disputes had already developed into strikes before the Department of Labor was requested to intervene. In others, strikes were threatened but had not yet taken place. In some cases, although no strike was immediately threatened, a controversy between employer and workers had developed to such a stage that an outside mediator was deemed necessary.

The Department of Labor conciliators were successful in adjusting 92 of these disputes, 51 were still pending at the close of the month, 5 were referred to other agencies, and 1 could not be adjusted.

These 149 disputes were scattered among 26 States and the Territory of Hawaii. Workers involved in the disputes are classified by craft in table 2.

TABLE 1.—Disputes Handled by Conciliators, May 1937, by States

State	Total disputes		Threatened strikes and controversies		Strikes	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
Alabama	6	1,450	4	1,260	2	190
California	5	1 6,158	2	1 88	3	6,070
Florida	1	180			1	180
Hawaii	1	1,100			1	1,100
Illinois	10	1 19,505	1	(1)	9	19,505
Indiana	5	1 2,225	4	1 725	1	1 1,500
Iowa	4	699	2	121	2	578
Kansas	1	250			1	250
Kentucky	3	49			3	49
Massachusetts	5	60	3	35	2	25
Michigan	11	1 45,563	4	1 13,465	7	32,098
Missouri	8	900	4	445	4	455
Montana	1	(1)	1	(1)		
Nebraska	1	310			1	310
New Hampshire	3	1 260	2	1 150	1	110
New Jersey	8	2,201	4	636	4	1,565
New York	5	1,147	1	2	4	1,145
Ohio	13	56,582	5	306	8	56,276
Oregon	1	1,100			1	1,100
Pennsylvania	22	47,965	6	1,984	16	45,981
Rhode Island	2	1 45			2	1 45
Texas	4	(1)	4	(1)		
Tennessee	9	1 1,692	5	1 1,236	4	456
Virginia	3	522	1	240	2	282
Washington	4	1 1,521	1	1 615	3	906
Wisconsin	7	2,119	1	300	6	1,819
West Virginia	6	289	1	110	5	179
Total	149	1 193,892	57	1 21,718	92	1 172,174

¹ Exact number of workers not known.

Agricultural
Aircraft
Boxcar
Brick
Building
Canner
Cigar
Clothing
Clerks
Drivers
Electrical
Furniture
Hotels
Iron
Labor
Laundry
Lumber
Mechanics
Mine
Oil-field
Optical
Packing
Pharmaceutical
Printing
Quarantine
Radios
Rubber
Warehousing

TABLE 2.—*Disputes Handled by Conciliators, May 1937,
by Craft of Workers Involved*

Craft	Total		Threatened strikes and controversies		Strikes	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
Agriculture	1	1,100			1	1,100
Aircraft and automobile workers	2	12,259	1	259	1	12,000
Boxmakers	2	1,110	1	275	1	835
Brick workers	4	1,440			4	440
Building trades	10	1,665	5	1,390	5	1,275
Cannery workers	2	3,115	1	615	1	2,500
Cigar makers	3	355			3	355
Clothing makers	9	1,137			9	1,137
Clerks	7	403	1	2	6	401
Drivers	8	1,097	4	1,652	4	445
Electrical workers	4	1,455	1	(1)	3	455
Furniture workers	6	1,268	2	1,132	4	1,136
Hotel workers	2	7,000			2	7,000
Iron, steel, and tin	14	124,118	3	573	11	123,545
Laborers—highway work	1	800	1	800		
Laundry workers	5	307	2	110	3	197
Lumber-mill workers	3	2,571	1	1,100	2	1,471
Mechanics	24	18,614	12	13,634	12	4,980
Mine and tunnel	7	9,381	4	1,004	3	8,377
Oil-field workers	3	(1)	3	(1)		
Optical workers	1	22			1	22
Packing-house workers	1	245			1	245
Pharmacists	2	220			2	220
Printing trades	5	560	2	320	3	240
Quarry workers	1	110	1	110		
Radio workers	2	3,593			2	3,593
Rubber workers	3	850	2	725	1	125
Warehousemen	1	12	1	12		
Miscellaneous	16	2,095	9	1,005	7	1,000
Total	149	193,892	57	21,718	92	172,174

¹ Exact number of workers not known.

Labor Turn-Over

A REVIEW OF FACTORY LABOR TURN-OVER, 1930 TO 1936

By HERMAN B. BYER and JOHN ANKER,
of the Bureau of Labor Statistics

EXCESSIVE labor turn-over has long been recognized as one of the chief sources of waste in industrial production. The experience of many establishments has clearly demonstrated that a major part of the loss involved as a result of a shifting working force can be prevented by better management. The worker is likely to lose wages between jobs; frequently he must learn new methods even though he continues in the same trade. If he changes occupations, he seldom earns as much on the new job until he has become skilled.

An essential preliminary to the prevention of waste of this kind is the collection and dissemination of more facts concerning the problem. Accordingly, the Department of Labor has been increasingly concerned in recent years with the development of adequate statistics on labor turnover. In 1929 the Bureau of Labor Statistics undertook the task of continuing the statistical series that had been initiated by the Metropolitan Life Insurance Co. The results of the Bureau's first survey were published in the August 1929 issue of the *Monthly Labor Review*. At that time, reports from approximately 400 manufacturing establishments employing roughly 700,000 workers formed the basis of the series. Since that time, the scope of the survey has been gradually broadened until at present more than 5,000 representative manufacturing establishments with approximately 2,500,000 employees are cooperating with the Bureau.

Although the Bureau has continued to report on the five important turn-over variables (quits, discharges, lay-offs, total separations, and accessions), the weighted arithmetic mean is now used in computing the rates instead of the unweighted median of company rates which was used by the Metropolitan Life Insurance Co.

Definition of Terms

The important labor turn-over variables are defined by the Bureau of Labor Statistics as follows:

An accession is the hiring of a new employee or the rehiring of an old employee.

A separation is a termination of employment of any of the three following kinds:
Quits, lay-offs, and discharges.

A quit is a termination of employment, generally initiated by the worker because of his desire to leave, but sometimes due to his physical incapacity.

A discharge is a termination of employment at the will of the employer, with prejudice to the worker because of some fault on the part of the worker.

A lay-off is a termination of employment at the will of the employer, without prejudice to the worker. A permanent lay-off, a long lay-off, an indefinite lay-off, and a short, definite lay-off with the name of the worker removed from the pay roll are counted by the Bureau as lay-offs; but a short, definite lay-off with the name of the worker remaining on the pay roll is not counted as a separation. (It is recognized that some companies retain persons on the pay roll and give them extended vacations when business is slow; other companies take them off the pay roll but promise to reemploy them when there is work. This variation in policy interferes with complete comparability in the monthly reports received from the companies and causes some distortion in the general lay-off rate.)

Transfers from one plant to another of the same company are not considered accessions or separations.

Method of Computation

The items of separation and accession are divided by the average number on the pay roll and multiplied by 100 to get the rate per 100 employees for the month. In compiling the rates the actual numbers for the several establishments are added and the general rates computed from the grand total. Thus each establishment has an influence or "weight" in the rate in proportion to its size.

If an equivalent annual rate is desired, the monthly rate can be multiplied by 11.77 if the month has 31 days; by 12.17 if it is a 30-day month; by 13.04 if it is a 28-day month; and by 12.62 if it is a 29-day month.

In comparing monthly rates the number of days in the month should be considered, as no adjustment is made in the monthly rate because of the number of its days. With the adjustment in the equivalent yearly rate this latter figure affords a more exact comparison as between months.

Summary of Labor Turn-Over

In periods of increased industrial activity, it is generally a fact that the quit rate mounts quite rapidly, as it is much easier for workers to get jobs at a time when more people are being hired. While this is undoubtedly true for industry as a whole, it does not hold for individual establishments where the skillful handling of personnel tends to lower the turn-over rates within the firm regardless of labor conditions for the industry.

Over the 7-year period the highest annual accession rate registered in any of the 16 industries was 144.23 per 100 employees in the automobiles and bodies industry and the lowest was 11.88 in electric machinery. The greatest annual total separation rate (139.20) occurred

in the brick industry. The rubber-tire industry showed the lowest separation rate (16.60). The quit rate ranged from 3.41 in brick manufacturing to 36.06 in sawmills. Sawmills, moreover, reported the highest annual discharge rate (12.68), and rubber tires the lowest, 0.62. The annual lay-off rate ranged from 7.50 in plants manufacturing rubber tires to 132.78 in the brick industry.

At no time over a 5-year period did the annual quit rate in plants manufacturing rubber tires exceed 9 percent of the average number of workers on the pay roll. In sawmills more than 35 percent of the workers quit their jobs in 2 of the 7 years.

Sawmills also showed high discharge rates, the lowest annual rate being 4.04 in 1936. The highest rate reported in the rubber-tire industry was 1.60 per 100 employees in 1931.

Brick plants consistently showed higher lay-off rates than other industries; the lowest, 46.17, occurred in 1936. The iron and steel industry reported a high of 26.89 in 1932. In no other year did the lay-offs in this industry exceed 22 of every 100 employees on the pay roll.

Automobiles and bodies, automobile parts, brick, sawmills, and slaughtering and meat packing reported high total separation rates. In some instances the annual rate showed that more than the average number of employees on the pay roll lost their jobs some time during the year. In contrast, boot and shoe plants, electrical machinery, foundries and machine shops, iron and steel, and rubber tires showed much lower rates.

In industries where the total separation rates were highest the accession rates were also high. During several years, accession rates of more than 100 percent were reported. The accession rates in plants with low total separation rates were usually much lower; in some years, however, probably due to expansion, comparatively high accession rates were shown.

Annual quit, discharge, lay-off, total separation, and accession rates for all manufacturing and for automobiles and bodies, automobile parts, boots and shoes, brick, cigars and cigarettes, cotton manufacturing, electrical machinery, foundries and machine shops, furniture, hardware, iron and steel, men's clothing, petroleum refining, rubber tires, sawmills, and slaughtering and meat packing are shown in table 1.

TABLE 1.—*Annual Labor Turn-Over Rates (per 100 Employees) in All Manufacturing and in 16 Separate Industries*

QUIT RATES

Industries	1930	1931	1932	1933	1934	1935	1936
All manufacturing.....	18.64	11.39	8.34	10.66	10.67	10.37	13.02
Automobiles and bodies.....	16.47	13.11	10.06	14.50	22.21	15.56	15.86
Automobile parts.....	23.32	11.01	8.99	15.90	19.47	13.36	19.12
Boots and shoes.....	22.36	19.11	11.55	11.55	10.46	7.93	9.88
Brick.....	(1)	(1)	3.41	6.43	11.61	19.45	14.20
Cigars and cigarettes.....	(1)	(1)	22.17	16.17	16.16	14.32	18.78

See footnotes at end of table.

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TABLE I.—*Annual Labor Turn-Over Rates (per 100 Employees) in All Manufacturing and in 16 Separate Industries—Continued*

QUIT RATES—Continued

Industries	1930	1931	1932	1933	1934	1935	1936
Cotton manufacturing	21.72	16.32	13.11	20.08	18.62	13.98	17.19
Electrical machinery	(1)	(1)	5.07	7.12	5.77	7.01	10.32
Foundries and machine shops	(1)	7.58	3.71	6.19	8.20	9.06	13.92
Furniture	(1)	9.71	5.20	9.31	7.42	8.57	15.72
Hardware	(1)	(1)	4.65	5.96	6.71	10.86	10.13
Iron and steel	19.55	9.39	7.10	7.67	8.92	9.42	12.48
Men's clothing	(1)	(1)	11.25	9.92	9.20	9.47	10.50
Petroleum refining	(1)	(1)	4.82	5.62	5.79	5.74	7.41
Rubber tires	(1)	10.30	5.98	8.93	6.02	5.32	8.19
Sawmills	36.06	16.17	9.48	17.11	14.41	35.87	21.54
Slaughtering and meat packing	26.59	15.61	10.48	11.38	13.72	9.01	13.94

DISCHARGE RATES

Industries	5.04	2.72	1.96	2.49	2.24	2.29	2.63
All manufacturing	3.95	3.99	2.65	4.81	4.68	3.21	3.08
Automobiles and bodies	6.71	3.83	1.92	3.91	4.90	3.94	5.17
Automobile parts	6.60	4.46	2.74	2.93	2.64	2.25	2.63
Boots and shoes	(1)	(1)	3.01	1.95	2.40	1.85	2.85
Brick	(1)	(1)	4.08	3.61	2.74	2.67	2.48
Cigars and cigarettes	(1)	(1)	6.29	4.53	3.24	4.56	3.73
Cotton manufacturing	(1)	(1)	1.22	1.16	1.43	1.40	1.83
Electrical machinery	(1)	(1)	2.74	1.23	2.00	2.37	3.07
Foundries and machine shops	(1)	(1)	4.02	1.79	3.72	2.77	2.72
Furniture	(1)	(1)	3.70	1.24	.66	1.28	4.02
Hardware	(1)	(1)	1.24	.66	1.28	1.07	1.02
Iron and steel	(1)	(1)	1.26	.95	1.43	1.16	1.41
Men's clothing	(1)	(1)	1.60	1.11	1.58	.69	.91
Petroleum refining	(1)	(1)	12.68	5.53	4.10	5.09	5.40
Rubber tires	(1)	(1)	9.17	5.47	3.91	4.58	4.61
Sawmills	(1)	(1)	9.17	5.47	3.91	4.58	4.61
Slaughtering and meat packing	(1)	(1)	12.68	5.53	4.10	5.09	5.40

LAY-OFF RATES¹

Industries	35.97	34.27	41.68	32.23	36.26	30.08	24.70
All manufacturing	49.73	74.14	86.16	77.65	90.41	51.46	58.92
Automobiles and bodies	86.87	56.18	87.02	76.12	92.64	58.71	39.45
Automobile parts	28.77	28.74	26.22	25.06	25.37	23.97	23.34
Boots and shoes	(1)	(1)	132.78	96.42	96.67	74.58	46.17
Brick	(1)	(1)	20.44	16.82	34.31	32.24	26.30
Cigars and cigarettes	(1)	(1)	28.30	32.60	46.23	31.85	35.01
Cotton manufacturing	(1)	(1)	51.97	27.99	21.34	18.42	14.62
Electrical machinery	(1)	(1)	43.35	41.45	31.36	37.76	28.51
Foundries and machine shops	(1)	(1)	50.96	54.88	53.28	50.24	33.91
Furniture	(1)	(1)	35.14	19.14	14.77	8.03	13.28
Hardware	(1)	(1)	21.83	21.18	26.89	17.52	19.91
Iron and steel	(1)	(1)	21.83	21.18	26.89	17.52	19.91
Men's clothing	(1)	(1)	31.60	26.90	31.48	28.86	34.36
Petroleum refining	(1)	(1)	19.55	18.15	19.07	22.79	20.68
Rubber tires	(1)	(1)	72.41	85.89	77.38	51.94	67.90
Sawmills	(1)	(1)	64.42	60.18	68.77	70.33	111.97
Slaughtering and meat packing	(1)	(1)	64.42	60.18	68.77	70.33	94.18

TOTAL SEPARATION RATES

Industries	59.65	48.38	51.98	45.38	49.17	42.74	40.35
All manufacturing	70.15	91.24	98.87	96.96	117.30	70.23	77.86
Automobiles and bodies	116.90	71.02	97.93	96.02	117.01	76.01	63.74
Automobile parts	57.73	52.31	40.51	39.54	38.47	34.15	35.85
Boots and shoes	(1)	(1)	139.20	104.80	110.68	95.88	63.22
Brick	(1)	(1)	46.60	36.60	53.21	49.23	47.56
Cigars and cigarettes	(1)	(1)	56.31	53.45	62.58	56.49	57.36
Cotton manufacturing	(1)	(1)	58.26	36.27	28.54	26.83	26.77
Electrical machinery	(1)	(1)	53.67	46.39	39.55	48.33	40.64
Foundries and machine shops	(1)	(1)	64.69	61.87	66.31	60.43	45.20
Furniture	(1)	(1)	40.69	26.22	22.76	22.91	25.56
Hardware	(1)	(1)	45.07	31.81	34.65	26.47	29.90
Iron and steel	(1)	(1)	44.01	38.15	41.84	39.74	45.84
Men's clothing	(1)	(1)	31.36	26.46	39.32	32.14	33.71
Petroleum refining	(1)	(1)	31.45	25.24	29.58	29.50	26.62
Rubber tires	(1)	(1)	121.15	107.59	90.96	74.14	87.80
Sawmills	(1)	(1)	100.18	81.26	83.16	86.29	130.30
Slaughtering and meat packing	(1)	(1)	100.18	81.26	83.16	105.99	88.37

See footnotes at end of table.

TABLE 1.—*Annual Labor Turn-Over Rates (per 100 Employees) in All Manufacturing and in 16 Separate Industries—Continued*

ACCESSION RATES

Industries	1930	1931	1932	1933	1934	1935	1936
All manufacturing.....	37.02	36.50	39.82	65.20	56.91	50.05	52.16
Automobiles and bodies.....	56.98	79.95	81.17	116.59	144.23	84.90	88.92
Automobile parts.....	76.79	64.05	81.70	124.64	125.23	91.61	84.43
Boots and shoes.....	41.90	50.29	39.64	46.36	41.55	38.21	37.86
Brick.....	(1)	(1)	92.72	126.80	108.98	106.62	83.50
Cigars and cigarettes.....	(1)	(1)	39.16	50.30	52.00	33.47	60.52
Cotton manufacturing.....	41.97	47.38	67.48	83.56	53.69	52.33	49.81
Electrical machinery.....	(1)	(1)	11.86	49.02	32.72	38.44	53.10
Foundries and machine shops.....	(1)	30.81	30.23	63.40	58.88	53.62	56.12
Furniture.....	(1)	55.55	50.36	85.81	58.69	57.28	68.98
Hardware.....	(1)	(1)	12.12	29.65	27.68	40.35	43.25
Iron and steel.....	35.31	20.12	17.86	54.91	33.98	29.58	38.85
Men's clothing.....	(1)	(1)	45.73	45.13	38.81	46.78	52.16
Petroleum refining.....	(1)	(1)	23.94	44.46	38.28	31.55	38.30
Rubber tires.....	(1)	21.21	15.24	62.43	28.99	20.86	35.12
Sawmills.....	89.61	81.16	75.30	108.79	93.35	103.89	82.56
Slaughtering and meat packing.....	92.21	80.02	75.92	112.26	133.42	87.51	99.37

¹ Data not collected.² Including temporary, indeterminate, and permanent lay-offs.*All Manufacturing*

Each month the Bureau of Labor Statistics computes quit, discharge, lay-off, total separation, and accession rates for all manufacturing. These monthly data are based on reports received from representative manufacturing establishments in 144 industries.

In 1930 the quit rate for all manufacturing was 18.64 per 100 employees (table 2). From 1930 the quit rate decreased gradually until it reached 8.34 in 1932. A slightly higher rate was indicated in 1933. In 1934 and 1935, the quit rate remained virtually stationary. In 1936 the highest annual quit rate since 1930 (13.02) was shown.

The ratio of quits to lay-offs is significant. Numerous quits with few lay-offs indicate that jobs are plentiful. Many lay-offs and few quits show that new positions are not easily obtained. Usually the trend in lay-off rates varies inversely with the trend in quit and discharge rates. Thus the lay-off rate was highest in 1932 when the quit and discharge rates were lowest. In 1936, when the lay-off rate was 24.70, the lowest point reached during the 7-year period, the quit rate was higher than at any time since 1930 and the discharge rate was virtually the same as in 1931.

Discharges represent only a small percent of total separations. The trend shown in the discharge rate over the 7-year period was similar to that for the quit rate. In 1930 the annual discharge rate for all manufacturing was 5.04. The rate during the period covered by the study was lowest in 1932 (1.96) and by 1936 had increased to 2.63.

The total separation rate is obtained by adding the quit, discharge, and lay-off rates. In 1930 the accession rate was 37.02 per 100 employees and the total separation rate was 59.65. In 1931 and 1932 the difference was not so pronounced, and in 1933 the accession rate

exceeded the total separation rate. For 4 consecutive years—1933, 1934, 1935, and 1936—the total separation rate was lower than the accession rate.

TABLE 2.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in Representative Factories, in 144 Industries, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	18.64	1.85	1.60	1.94	2.11	2.01	1.85	1.35	1.40	1.50	1.29	0.90	0.84
1931	11.39	.74	.94	1.14	1.12	1.02	1.10	1.05	1.16	1.00	.72	.66	
1932	8.34	.71	.86	.91	.68	.66	.63	.67	.76	.65	.54	.56	
1933	10.66	.65	.49	.53	.63	.84	1.03	1.25	1.22	1.65	.87	.78	.72
1934	10.67	.90	.85	.93	1.11	1.01	.94	.70	.75	1.55	.73	.62	.58
1935	10.37	.76	.73	.75	.93	1.21	.83	.90	.86	1.05	.89	.77	.69
1936	13.02	.71	.68	.86	1.16	1.06	1.13	1.15	1.23	1.57	1.29	1.13	1.05
Discharge rate:													
1930	5.04	.54	.62	.60	.53	.48	.46	.32	.36	.36	.32	.24	.21
1931	2.72	.19	.20	.26	.31	.28	.23	.25	.22	.24	.21	.17	.16
1932	1.96	.19	.18	.21	.22	.16	.14	.14	.14	.14	.14	.15	.15
1933	2.49	.15	.13	.14	.15	.18	.26	.26	.31	.27	.24	.22	.18
1934	2.24	.18	.19	.21	.23	.22	.18	.19	.19	.16	.19	.15	.15
1935	2.29	.18	.18	.17	.20	.17	.20	.20	.21	.19	.21	.20	.18
1936	2.63	.20	.17	.19	.21	.20	.23	.23	.27	.26	.24	.21	.22
Lay-off rate: ¹													
1930	35.97	2.70	2.50	2.83	2.57	2.68	3.00	4.17	3.99	3.14	2.88	2.77	2.74
1931	34.27	1.95	1.75	1.75	1.96	2.43	3.84	3.32	2.40	4.22	5.01	3.03	2.61
1932	41.68	2.45	2.43	3.30	4.60	4.27	4.83	4.47	3.04	3.57	2.67	2.70	3.35
1933	32.23	2.76	3.78	3.93	2.00	1.34	1.18	1.98	1.87	2.34	3.47	3.79	3.79
1934	36.26	2.35	1.85	2.08	2.04	3.65	3.48	2.96	3.56	3.41	4.38	3.78	2.72
1935	30.08	2.10	1.88	2.32	2.60	3.00	3.46	2.57	2.70	1.95	2.03	2.58	2.89
1936	24.70	2.66	2.21	1.83	1.92	2.06	1.92	1.84	3.23	1.47	1.72	1.70	2.14
Total separation rate:													
1930	59.65	5.09	4.72	5.37	5.21	5.17	5.31	5.84	5.75	5.00	4.49	3.91	3.79
1931	48.38	2.88	2.69	2.95	3.41	3.83	5.09	4.67	3.67	5.62	6.22	3.92	3.43
1932	51.98	3.35	3.32	4.37	5.73	5.11	5.63	5.24	3.85	4.47	3.46	3.39	4.06
1933	45.38	3.56	4.40	4.60	2.78	2.36	2.47	3.49	3.40	4.26	4.58	4.79	4.69
1934	49.17	3.43	2.89	3.22	3.38	4.88	4.60	3.85	4.50	5.12	5.30	4.55	3.45
1935	42.74	3.04	2.79	3.24	3.73	4.38	4.49	3.67	3.77	3.19	3.13	3.55	3.76
1936	40.35	3.57	3.06	2.88	3.29	3.32	3.28	3.22	4.73	3.30	3.25	3.04	3.41
Accession rate:													
1930	37.02	3.95	3.94	4.15	3.55	3.28	2.92	2.51	2.71	3.27	2.56	2.05	2.13
1931	36.59	2.97	2.82	3.67	3.06	2.79	2.41	3.02	2.60	3.58	2.75	3.63	3.29
1932	39.82	4.15	2.75	2.75	2.76	2.59	2.70	3.01	4.21	5.04	3.72	3.07	3.07
1933	65.20	3.48	2.56	2.22	4.87	7.21	10.21	9.48	8.50	5.53	3.97	3.71	3.37
1934	56.91	5.81	6.71	6.33	5.18	4.19	3.58	3.71	3.24	3.61	4.09	4.32	6.14
1935	50.05	6.33	4.23	3.79	3.63	3.01	3.18	4.17	4.60	4.95	5.23	3.63	3.30
1936	52.16	3.65	2.95	3.97	4.46	4.05	4.49	4.94	4.72	5.09	4.83	4.60	4.41

¹ Including temporary, indeterminate and permanent lay-offs.

Sixteen Industries

In addition to the information for manufacturing as a whole, details of labor turn-over are available for 16 manufacturing industries. Separate tables showing the quit, discharge, lay-off, total separation, and accession rates, by months, from January 1930 to December 1936, inclusive, are presented for the following industries: Automobiles and bodies, automobile parts, boots and shoes, brick, cigars and cigarettes, cotton manufacturing, electrical machinery, foundries and machine shops, furniture, hardware, iron and steel, men's clothing, petroleum refining, rubber tires, sawmills, and slaughtering and meat packing.

AUTOMOBILES AND BODIES

Changing industrial conditions in the automobile industry were in part responsible for the high labor turn-over in that industry. The

seriousness of the situation caused the American Automobile Manufacturers Association to undertake a study of employment conditions in the automobile industry. To stabilize employment and increase the annual incomes of the workers, two major changes in production policy were inaugurated in 1935: (1) New models which had previously been introduced in the spring were to be introduced henceforth in the fall, and (2) inventories were to be increased during slack periods.

TABLE 3.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Automobiles and Bodies Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930-----	16.47	3.06	1.05	1.44	1.73	2.01	1.38	0.92	1.11	1.07	1.04	0.76	0.90
1931-----	13.11	.87	.88	1.23	1.55	1.33	1.02	1.13	1.11	1.05	.85	.89	1.20
1932-----	10.06	1.05	.82	2.15	1.34	.78	.64	.61	.65	.62	.31	.57	.52
1933-----	14.50	.88	.53	.62	.84	1.10	1.23	1.41	1.58	2.46	1.29	1.18	1.38
1934-----	22.21	2.81	3.15	3.36	3.28	2.46	1.59	1.21	.95	.58	.80	.67	1.35
1935-----	15.56	1.96	1.68	1.72	1.96	1.38	.99	.73	.70	.76	1.19	1.42	1.07
1936-----	15.86	.86	.70	.92	1.40	1.58	1.23	1.28	.99	1.24	1.74	2.12	1.80
Discharge rate:													
1930-----	3.95	.89	.28	.43	.39	.41	.41	.21	.29	.17	.16	.15	.16
1931-----	3.99	.25	.28	.49	.48	.35	.25	.36	.34	.25	.31	.27	.36
1932-----	2.65	.31	.29	.47	.18	.18	.15	.11	.14	.15	.19	.24	.24
1933-----	4.81	.45	.32	.18	.31	.35	.54	.58	.48	.38	.58	.31	.33
1934-----	4.68	.61	.64	.60	.69	.51	.40	.28	.21	.14	.19	.10	.31
1935-----	3.21	.34	.29	.29	.37	.34	.22	.21	.19	.12	.26	.33	.25
1936-----	3.08	.25	.15	.18	.25	.29	.29	.28	.22	.23	.31	.33	.30
Lay-off rate:¹													
1930-----	49.73	3.15	1.11	1.34	.89	3.99	4.44	9.65	7.70	5.52	4.82	3.69	3.34
1931-----	74.14	3.23	1.83	1.79	1.93	2.86	9.03	6.51	3.04	12.28	21.63	7.63	2.68
1932-----	86.16	3.85	2.37	5.09	4.99	4.79	4.10	13.65	10.03	18.04	8.86	6.99	3.40
1933-----	77.65	3.58	13.15	15.98	2.25	1.53	1.53	3.49	3.38	8.31	16.55	4.37	3.53
1934-----	90.41	2.87	2.49	3.53	3.95	11.42	9.63	8.32	11.13	16.79	13.92	4.21	2.15
1935-----	51.46	1.50	2.14	2.05	1.95	6.06	6.04	4.76	13.84	2.30	2.39	2.85	1.98
1936-----	58.92	4.80	3.29	1.77	1.22	2.06	2.99	6.80	26.94	3.10	1.85	2.03	2.07
Total separation rate:													
1930-----	70.15	7.10	2.44	3.21	3.01	6.41	6.23	10.78	9.19	6.76	6.02	4.60	4.40
1931-----	91.24	4.35	2.99	3.51	3.96	4.54	10.30	8.00	4.49	13.58	22.79	8.79	4.24
1932-----	98.87	5.21	3.48	7.71	6.51	5.75	4.89	14.37	10.82	18.81	9.36	7.80	4.16
1933-----	96.96	4.91	14.00	16.78	3.40	2.98	3.30	5.48	5.44	11.15	18.42	5.86	5.24
1934-----	117.30	6.29	6.28	7.49	7.92	14.39	11.62	9.81	12.29	17.51	14.91	4.98	3.81
1935-----	70.23	3.80	4.11	4.06	4.28	7.78	10.85	5.70	14.73	3.18	3.84	4.60	3.30
1936-----	77.86	5.81	4.14	2.87	2.87	3.93	4.51	8.36	28.15	4.57	3.90	4.48	4.17
Accession rate:													
1930-----	56.98	13.68	3.88	5.84	7.30	3.16	1.94	2.00	3.37	3.37	3.39	6.17	2.88
1931-----	79.95	4.42	6.26	8.14	5.28	3.26	3.74	4.21	2.80	4.62	4.09	17.52	15.61
1932-----	81.17	10.33	4.03	6.07	7.77	9.94	7.81	2.16	2.00	4.15	8.44	7.99	10.48
1933-----	116.59	11.11	3.50	4.43	11.99	8.56	15.16	12.48	5.73	6.16	5.66	11.74	19.98
1934-----	144.23	25.78	19.59	15.51	13.22	4.52	3.42	2.09	2.39	2.88	7.00	20.89	26.94
1935-----	84.90	16.74	5.36	5.86	5.54	1.98	2.01	2.39	3.39	10.49	19.19	7.89	4.06
1936-----	88.92	2.34	3.77	4.98	5.81	3.84	3.08	2.99	4.30	20.35	16.85	10.79	9.82

¹ Including temporary, indeterminate, and permanent lay-offs.

In 1934 the separation rate was 117.30 per 100 employees, and an accession rate of 144.23 was reported (table 3). Immediately after the adoption of the new policies the total separation rate dropped to 70.23 in 1935 and the accession rate to 84.90. Pronounced decreases were shown for quits, discharges, and lay-offs. In 1936, however, the total separation rate and the accession rate increased, the separation rate being 77.86 per 100 employees and the accession rate 88.92.

AUTOMOBILE PARTS AND EQUIPMENT

The automobile parts and equipment industry includes the manufacture of parts and equipment for (1) new automobiles and (2)

replacement of worn-out parts. The Bureau computes rates covering both branches of the industry regardless of whether parts and equipment are manufactured for new or old cars.

The trend shown in the automobile parts and equipment industry (table 4) was similar to that of the automobiles and bodies industry. Fluctuations in employment were not so marked in 1935 and 1936 in this industry as in the preceding years. During the 7-year period ending with 1936 the lowest annual total separation rate was 63.74 in 1936. The accession rate per 100 employees in 1936 was 84.43. The separation rate of 117.01 and the accession rate of 125.23 reported in 1934 reflected the adjustments in the volume of production made within the industry as a result of the seasonal demand for automobiles. The decreases in the separation and accession rates in 1935 and 1936 were attributed to that part of the industry manufacturing parts and equipment for use in new automobiles. The adoption by the automobiles and bodies industry of the policies of the introduction of new models in the fall and of increasing inventories during slack periods was undoubtedly a potent factor in directing the trend of the separation and accession rates in the automobile parts and equipment industry.

TABLE 4.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in Automobile Parts and Equipment Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	23.32	2.07	1.57	2.75	3.45	2.76	2.28	1.80	1.51	1.86	1.60	0.94	0.73
1931	11.01	.73	.65	1.32	1.58	1.41	.94	.97	.70	.70	.80	.64	.57
1932	8.99	1.11	.84	.59	.61	.98	1.02	.61	.54	.49	.59	.55	1.06
1933	15.99	1.61	.60	.33	.87	.99	1.47	1.50	1.51	1.41	3.22	1.08	1.40
1934	19.47	2.60	3.02	3.33	2.84	2.20	1.09	.91	.89	.64	.61	.60	.74
1935	13.36	1.14	1.16	1.30	1.33	1.18	.82	.77	.70	.93	1.35	1.26	1.42
1936	19.12	1.07	.88	1.40	1.66	1.76	1.64	1.64	1.43	1.46	1.91	2.09	2.18
Discharge rate:													
1930	6.71	.74	.72	.89	.75	.76	.35	.33	.60	.75	.50	.16	.16
1931	3.83	.27	.31	.54	.62	.51	.23	.16	.23	.22	.22	.28	.24
1932	1.92	.38	.25	.14	.10	.15	.10	.09	.06	.06	.12	.17	.30
1933	3.91	.30	.19	.10	.25	.28	.38	.38	.43	.33	.40	.43	.44
1934	4.90	.63	.66	.96	.71	.43	.29	.21	.23	.14	.15	.21	.28
1935	3.94	.39	.31	.34	.31	.28	.17	.25	.21	.20	.42	.61	.45
1936	5.17	.36	.34	.39	.32	.42	.37	.40	.36	.39	.53	.66	.63
Lay-off rate: ¹													
1930	86.87	6.54	6.62	3.76	4.90	10.29	10.77	8.96	7.37	12.54	6.94	4.10	4.08
1931	56.18	4.50	2.06	1.60	2.04	3.97	9.14	7.82	6.91	4.23	6.78	3.98	3.06
1932	87.02	4.37	7.44	6.60	13.50	6.00	6.36	12.68	11.35	5.41	5.40	2.63	5.19
1933	76.12	4.37	13.28	14.67	2.76	1.51	1.63	1.50	3.55	9.58	15.11	5.29	2.87
1934	92.64	4.15	1.49	4.60	5.66	13.95	13.27	7.09	11.55	14.70	9.45	4.49	2.15
1935	58.71	2.14	2.80	4.91	5.56	5.39	11.95	7.87	5.54	2.09	2.13	4.62	3.71
1936	39.45	6.53	5.46	2.81	1.96	2.91	4.26	3.48	3.85	3.36	1.40	1.54	1.89
Total separation rate:													
1930	116.90	9.35	8.91	7.40	9.10	13.81	13.40	11.09	9.48	15.15	9.04	5.20	4.97
1931	71.02	5.59	3.02	3.46	4.24	5.89	10.31	8.95	7.84	5.15	7.80	4.90	3.87
1932	97.93	5.86	8.53	7.33	14.21	7.22	7.48	13.38	11.95	5.96	6.11	3.35	6.55
1933	96.02	6.28	14.07	15.10	3.88	2.78	3.48	3.38	5.49	11.32	18.73	6.80	4.71
1934	117.01	7.38	5.17	8.98	9.21	16.58	14.65	8.21	12.67	15.48	10.21	5.30	3.17
1935	76.01	3.67	4.27	6.55	7.20	6.85	12.94	8.89	6.45	3.22	3.90	6.49	5.58
1936	63.74	7.96	6.68	4.60	3.94	5.09	6.27	5.52	5.64	5.21	3.84	4.29	4.70
Accession rate:													
1930	76.70	10.86	7.83	9.61	7.59	6.37	3.65	5.25	4.45	5.06	6.04	5.34	4.65
1931	64.05	4.99	7.42	9.57	6.84	3.95	1.32	2.25	4.53	3.31	4.35	6.59	8.93
1932	81.79	8.03	4.99	2.98	4.18	5.38	3.21	3.19	3.73	6.79	5.50	18.12	15.69
1933	124.64	7.99	3.04	3.41	14.16	9.41	14.18	12.33	9.61	7.04	6.21	20.36	17.90
1934	125.23	24.81	22.61	18.45	6.75	3.81	2.87	3.71	1.80	2.53	4.45	13.16	20.28
1935	91.61	19.51	7.58	4.04	3.32	2.36	2.90	4.40	6.88	12.98	12.94	7.79	6.91
1936	84.43	3.61	2.99	5.87	6.64	5.12	4.22	4.50	5.47	10.72	12.93	13.21	9.15

¹ Including temporary, indeterminate, and permanent lay-offs.

BOOTS AND SHOES

Over a 6-year period continuous and sharp decreases were reported in the boot and shoe industry in the quit and discharge rates (table 5). In 1930 the annual quit rate was 22.36 and in 1935, 7.93. The discharge rate decreased in approximately the same ratio. In 1930 and 1935 the rates were 6.60 and 2.25, respectively. Such decreases in quit and discharge rates over a period of time, with the lay-off rate showing a small decrease (28.77 in 1930 to 23.97 in 1935), indicated that jobs were scarce. In 1936 the trend was reversed. Increases were shown in quit and discharge rates and a small decrease occurred in the lay-off rate. The lowest accession rate (37.86) in the 7-year period was shown in 1936. A comparison of monthly rates in this industry showed that the peak in lay-offs was usually reached during the last quarter of the year.

TABLE 5.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Boots and Shoes Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	22.36	1.97	1.93	2.00	2.48	2.06	1.94	2.04	2.19	2.01	1.71	1.00	1.03
1931	19.11	1.23	1.27	1.58	1.97	1.57	1.61	2.27	2.18	2.30	1.20	.87	1.06
1932	11.55	1.10	1.21	1.46	1.07	.76	.86	.81	.89	1.16	.92	.57	.74
1933	11.55	.76	.72	.86	.80	.79	.89	1.22	1.43	2.07	.60	.65	.76
1934	10.46	.88	1.64	1.49	.78	.92	.79	.86	.76	.64	.55	.47	.68
1935	7.93	.62	.63	.66	.59	.68	.59	.89	.88	.72	.61	.44	.62
1936	9.88	.60	.57	.68	.67	.75	.74	.86	1.02	1.19	1.07	.85	.88
Discharge rate:													
1930	6.60	.78	.70	.65	.68	.53	.47	.57	.73	.51	.47	.27	.24
1931	4.46	.37	.31	.50	.42	.49	.40	.53	.44	.43	.22	.15	.20
1932	2.74	.27	.31	.41	.26	.18	.19	.20	.23	.22	.16	.14	.17
1933	2.93	.17	.22	.19	.16	.16	.21	.33	.42	.47	.20	.16	.24
1934	2.64	.23	.27	.33	.25	.19	.21	.30	.25	.17	.11	.12	.21
1935	2.25	.25	.26	.22	.16	.17	.15	.23	.22	.17	.12	.15	.15
1936	2.63	.23	.19	.18	.16	.16	.33	.21	.29	.24	.24	.20	.20
Lay-off rate:¹													
1930	28.77	1.27	1.37	1.34	2.13	2.47	1.82	1.76	2.84	2.78	2.73	4.38	3.88
1931	28.74	1.88	1.23	1.16	1.53	2.37	1.85	1.40	1.80	2.94	6.02	4.13	2.43
1932	26.22	1.21	.87	2.43	2.99	3.35	3.07	1.24	1.24	1.40	2.13	3.29	3.00
1933	25.06	1.44	1.15	1.52	1.61	1.28	1.12	.96	1.83	2.07	2.89	4.64	4.55
1934	25.37	1.40	.99	1.46	1.56	2.08	3.19	.95	2.30	2.33	3.25	3.63	2.23
1935	23.97	1.20	.96	1.24	2.15	3.93	2.36	1.10	1.67	2.32	1.87	3.22	1.95
1936	23.34	1.12	1.01	1.78	2.01	2.64	2.86	.53	1.04	1.68	2.42	3.66	2.59
Total separation rate:													
1930	57.73	4.02	4.00	3.99	5.29	5.06	4.23	4.37	5.76	5.30	4.91	5.65	5.15
1931	52.31	3.48	2.81	3.24	3.92	4.43	3.86	4.20	4.42	5.67	7.44	5.15	3.69
1932	40.51	2.58	2.39	4.30	4.32	4.29	4.12	2.25	2.36	2.78	3.21	4.00	3.91
1933	39.54	2.37	2.09	2.57	2.57	2.23	2.22	2.51	3.68	4.61	3.69	5.45	5.55
1934	38.47	2.51	2.90	3.28	2.59	3.19	4.19	2.11	3.31	3.14	3.91	4.22	3.12
1935	34.15	2.07	1.85	2.12	2.90	4.78	3.10	2.22	2.77	3.21	2.60	3.81	2.72
1936	35.85	1.95	1.77	2.64	2.84	3.55	3.93	1.60	2.35	3.11	3.73	4.71	3.67
Accession rate:													
1930	41.90	5.97	3.09	3.18	2.76	3.19	3.78	4.74	4.08	2.99	2.05	2.41	3.66
1931	50.29	4.48	5.88	4.92	4.34	4.95	5.18	7.16	4.15	2.00	1.01	2.62	3.60
1932	39.64	4.84	4.99	4.10	1.60	.92	2.49	3.89	3.84	5.68	2.28	1.93	3.08
1933	46.36	3.67	3.75	2.90	3.17	4.27	5.25	8.06	5.25	2.41	2.35	1.54	3.74
1934	41.55	5.96	6.09	4.40	2.46	2.22	3.53	4.37	1.90	1.09	1.21	2.61	5.71
1935	38.21	5.48	3.63	2.42	1.21	1.65	6.15	5.17	2.44	1.65	1.65	2.16	4.60
1936	37.86	4.08	2.51	1.85	1.11	1.34	3.49	6.98	3.28	2.36	1.86	2.42	6.58

¹ Including temporary, indeterminate, and permanent lay-offs.

BRICK

The sharp decrease in expenditures for construction was probably the principal reason for the intermittent operations shown by the high

annual total separation and accession rates in the brick industry during 1932, 1933, and 1934 (table 6). Inasmuch as many brickyards continued in partial operation even though the stock was not moving, the increase in the volume of construction, which began in the first half of 1933, was not immediately reflected in the turn-over rates for the industry. In 1935 the total separation rate dropped to less than 100 and the accession rate remained virtually the same as in the preceding year. The lowest total separation rate (63.32) in the 7 years occurred in 1936.

Weather conditions have a direct influence on the turn-over rate in brick manufacturing. Lay-offs are more numerous when the weather is unfavorable, and accessions occur in greatest numbers when the weather is good. As a result, turn-over in the brick industry is usually somewhat higher than in industries less subject to seasonal or climatic conditions.

TABLE 6.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Brick Industry, April 1931 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1931		(1)	(1)	(1)	0.86	1.77	0.80	0.93	0.80	1.34	0.49	0.50	0.29
1932	3.41	0.43	0.32	0.31	.26	.28	.34	.23	.22	.40	.26	.19	.17
1933	6.43	.25	.12	.15	.28	.35	.62	.75	.94	1.02	.59	.36	1.00
1934	11.61	.75	.77	.70	.74	.55	2.16	2.64	.55	.80	1.06	.38	.51
1935	19.45	.55	.43	.36	11.42	2.37	.55	.47	.69	.72	.67	.67	.55
1936	14.20	.40	.54	.84	1.11	1.34	1.10	1.01	1.24	3.17	1.16	1.35	.94
Discharge rate:													
1931		(1)	(1)	(1)	.61	.66	.44	.50	.33	.33	.14	.55	.41
1932	3.01	.66	.45	.38	.37	.17	.20	.13	.13	.12	.17	.18	.05
1933	1.95	.21	.11	.19	.08	.20	.18	.17	.13	.40	.07	.08	.13
1934	2.40	.30	.31	.35	.21	.21	.22	.08	.15	.08	.17	.16	.16
1935	1.83	.04	.09	.08	.05	.29	.15	.13	.18	.19	.20	.13	.30
1936	2.85	.24	.13	.20	.27	.32	.18	.25	.38	.32	.21	.17	.18
Lay-off rate: ²													
1931		(1)	(1)	(1)	4.01	8.65	5.45	7.90	7.64	8.66	10.04	10.17	15.67
1932	132.78	16.62	8.47	4.64	11.50	8.00	13.03	10.05	8.75	9.20	11.40	10.31	20.81
1933	96.42	6.83	7.49	8.47	5.28	3.59	3.63	5.27	5.20	11.25	10.98	14.05	14.38
1934	96.67	3.98	3.93	5.29	3.91	6.22	6.81	8.22	9.95	15.55	8.94	10.77	13.10
1935	74.58	8.32	4.49	5.05	5.87	5.92	5.98	7.30	6.00	5.98	5.49	6.13	8.05
1936	46.17	6.06	5.80	2.93	2.17	2.43	2.16	2.24	4.08	2.93	3.39	4.10	7.88
Total separation rate:													
1931		(1)	(1)	(1)	5.48	11.08	6.69	9.33	8.77	10.33	10.67	11.22	16.37
1932	139.20	17.71	9.24	5.33	12.13	8.45	13.57	10.41	9.10	9.72	11.83	10.68	21.03
1933	104.80	7.29	7.72	8.81	5.64	4.14	4.43	6.19	6.27	12.67	11.64	14.49	15.51
1934	110.68	5.03	5.01	6.34	4.86	6.98	0.19	10.94	10.65	16.43	10.17	11.31	13.77
1935	95.86	8.91	5.01	5.49	17.34	8.58	6.68	7.90	6.87	6.89	6.36	6.93	8.90
1936	63.22	6.70	6.47	3.97	3.55	4.09	3.44	3.50	5.70	6.42	4.76	5.62	9.00
Accession rate:													
1931		(1)	(1)	(1)	8.68	7.89	6.67	6.02	7.72	4.39	5.06	6.70	3.33
1932	92.72	4.57	6.60	10.36	7.82	10.45	8.95	7.91	8.98	8.90	6.66	7.67	3.85
1933	126.80	9.66	6.73	7.88	10.61	18.89	27.63	11.58	10.25	5.25	6.65	6.08	5.59
1934	108.98	15.71	9.82	8.41	10.33	9.50	7.14	6.26	6.69	4.39	11.95	10.76	8.02
1935	106.62	10.10	11.42	11.81	9.92	15.77	7.91	8.03	7.62	7.50	6.78	5.31	4.45
1936	83.50	5.18	4.61	13.00	13.13	7.78	7.69	6.96	5.35	5.92	4.49	5.51	3.79

¹ No data collected.

² Including temporary, indeterminate, and permanent lay-offs.

CIGARS AND CIGARETTES

The introduction of machinery has influenced labor turn-over in the cigar and cigarette industry. A study of technological changes in the cigar industry made by the Bureau of Labor Statistics² esti-

mated the number of employees displaced in 1931 at 21,356. The displacement of workers by machinery has been reflected in turn-over rates in the industry over a period of years. Prior to April 1931 the Bureau did not collect data from the cigar and cigarette industry. In 2 of the 5 years included in this study, 1933 and 1936, the accession rates exceeded the total separation rates (table 7). The total separation rates were higher than the hiring rates in 1932, 1934, and 1935.

TABLE 7.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Cigar and Cigarette Industry, April 1931 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1931.....		(1)	(1)	(1)	3.24	1.43	2.07	1.93	2.20	3.09	3.41	1.76	1.00
1932.....	22.17	1.69	2.03	1.80	1.84	2.32	2.00	2.20	2.04	1.71	1.98	1.93	.63
1933.....	16.17	1.15	1.00	1.05	1.16	1.26	1.64	1.86	2.07	1.27	1.40	1.37	.94
1934.....	16.16	1.63	1.07	.95	1.60	1.99	1.86	1.60	1.53	1.40	1.31	.80	.42
1935.....	14.32	1.41	1.28	.58	1.17	1.15	1.51	1.58	1.33	1.12	1.30	1.00	.89
1936.....	18.78	1.14	1.09	.93	1.40	1.50	2.17	1.77	2.00	2.01	1.92	1.45	1.40
Discharge rate:													
1931.....		(1)	(1)	(1)	.53	.40	.42	.65	.64	.92	.57	.50	.36
1932.....	4.08	.33	.32	.27	.33	.39	.49	.42	.54	.39	.26	.21	.13
1933.....	3.61	.21	.20	.33	.28	.18	.23	.20	.31	.21	.59	.63	.24
1934.....	2.74	.26	.27	.25	.23	.36	.25	.22	.19	.21	.30	.09	.11
1935.....	2.67	.25	.49	.10	.14	.23	.18	.30	.23	.22	.27	.17	.09
1936.....	2.48	.18	.23	.25	.26	.23	.21	.18	.14	.27	.27	.15	.11
Lay-off rate: ¹													
1931.....		(1)	(1)	(1)	.87	2.21	1.58	2.65	.76	1.98	3.05	2.45	2.35
1932.....	20.44	2.77	2.80	2.40	1.05	.72	3.16	.52	1.47	.96	.88	.67	3.04
1933.....	16.82	2.49	1.93	2.30	1.21	1.40	.96	.42	1.56	2.01	.95	.62	.97
1934.....	34.31	1.05	2.14	3.84	7.06	1.09	1.15	.60	.47	3.15	5.43	7.61	.72
1935.....	32.24	3.37	1.76	1.59	2.71	1.25	.51	.99	.93	.59	.60	1.38	16.56
1936.....	26.30	3.63	1.66	1.45	.82	1.13	6.43	.50	.54	.50	.74	2.47	6.43
Total separation rate:													
1931.....		(1)	(1)	(1)	4.64	4.04	4.07	5.23	3.60	5.99	7.03	4.71	3.71
1932.....	46.69	4.79	5.15	4.47	3.22	3.43	5.65	3.14	4.05	3.06	3.12	2.81	3.80
1933.....	36.60	3.85	3.13	3.68	2.65	2.84	2.83	2.48	3.94	3.49	2.94	2.62	2.15
1934.....	53.21	2.94	3.48	5.04	8.89	3.44	3.26	2.42	2.19	4.76	7.04	8.50	1.25
1935.....	49.23	5.03	3.53	2.27	4.02	2.63	2.20	2.87	2.49	1.93	2.17	2.55	17.54
1936.....	47.56	4.95	2.98	2.63	2.48	2.86	8.81	2.45	2.68	2.78	2.93	4.07	7.94
Accession rate:													
1931.....		(1)	(1)	(1)	4.78	4.08	5.12	10.59	5.08	6.51	3.61	2.36	2.99
1932.....	39.16	3.49	1.78	4.83	3.98	3.00	4.90	6.55	3.39	2.95	1.40	2.31	.58
1933.....	50.30	2.89	1.91	0.91	3.86	8.21	7.10	6.06	11.38	5.38	9.05	1.78	.77
1934.....	52.00	5.97	6.23	2.35	3.17	3.33	3.53	8.36	9.08	4.24	2.47	2.43	.84
1935.....	33.47	1.48	1.15	4.81	2.57	3.74	3.47	2.65	2.41	4.23	3.18	1.79	1.99
1936.....	60.52	15.40	4.16	3.09	3.29	2.68	4.35	9.83	4.78	5.22	3.61	2.18	1.93

¹ No data collected.

² Including temporary, indeterminate, and permanent lay-offs.

COTTON MANUFACTURING

During the 7-year period the annual quit rates in cotton mills (table 8) were consistently higher than the rates for all manufacturing. When all manufacturing registered the lowest quit rate (8.34) in 1932, cotton mills reported a quit rate of 13.11 per 100 employees. Thirteen out of every 100 employees on the pay rolls of cotton mills quit at a time when the quit rate in all manufacturing was lower than at any other time. A comparison of quit rates in 1930 in southern mills with those of northern mills showed that quits were more numerous in southern establishments.³ A survey of labor turn-over in the

³ See *Monthly Labor Review* for November 1932 (pp. 1005-1015).

cotton industry in 1935 and 1936⁴ substantiated this conclusion. The southern cotton mills showed a quit rate in 1936 of 19.89 as compared with 11.28 in the northern mills, and of 15.91 as against 10.34 in 1935.

The highest annual discharge rate (6.29) was shown in 1930. The lay-off rate in 1932 was more than twice as high as the rate reported in 1936 (20.86). Total separations reached the highest level in 1932, when approximately 62 workers per 100 employees were separated from the pay roll. The highest accession rate (83.56) occurred in 1933.

TABLE 8.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Cotton-Manufacturing Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930.....	21.72	2.07	1.98	2.27	2.40	2.36	2.06	1.91	1.58	1.88	1.41	1.22	0.58
1931.....	16.32	1.00	1.00	1.36	1.64	1.53	1.25	1.48	1.57	1.65	1.42	1.19	1.23
1932.....	13.11	1.19	1.12	1.15	1.03	.90	.64	.95	1.36	1.42	1.33	1.13	.89
1933.....	20.08	1.51	1.18	1.04	1.92	2.22	2.70	2.26	2.02	1.75	1.32	1.14	1.02
1934.....	18.62	1.31	1.28	1.17	1.20	1.31	1.30	.88	.85	6.49	1.12	.93	.78
1935.....	13.98	.99	.96	1.07	1.26	.98	.97	1.87	1.36	1.34	1.24	1.11	.83
1936.....	17.19	1.02	1.07	1.16	1.39	1.22	1.43	1.65	1.73	2.12	1.93	1.25	1.22
Discharge rate:													
1930.....	6.29	.65	.60	.69	.68	.55	.58	.55	.46	.46	.48	.35	.24
1931.....	4.53	.40	.34	.36	.43	.37	.46	.40	.38	.36	.35	.34	.34
1932.....	3.24	.34	.24	.34	.30	.22	.26	.23	.24	.29	.20	.30	.28
1933.....	4.56	.30	.29	.23	.43	.37	.43	.51	.58	.46	.34	.35	.27
1934.....	3.73	.40	.39	.34	.26	.30	.28	.32	.27	.33	.31	.29	.24
1935.....	3.25	.28	.28	.33	.26	.26	.25	.27	.31	.28	.28	.25	.20
1936.....	3.36	.23	.26	.30	.32	.29	.26	.33	.30	.31	.29	.23	.24
Lay-off rate: ¹													
1930.....	28.30	2.16	1.92	2.20	2.23	2.07	2.17	3.34	3.58	2.44	2.09	2.18	1.92
1931.....	32.60	2.60	1.87	2.00	2.52	2.30	2.24	3.07	2.29	2.38	3.70	3.67	3.96
1932.....	46.23	2.30	2.33	3.06	6.65	6.35	10.36	4.13	1.17	1.57	1.73	3.22	3.36
1933.....	31.85	2.04	3.77	4.16	1.51	.77	.61	2.48	3.12	2.88	2.74	4.58	3.19
1934.....	35.01	2.14	1.53	1.87	2.22	5.63	5.11	1.89	2.39	2.46	3.37	4.09	2.31
1935.....	38.88	2.07	2.38	4.31	3.93	4.03	6.44	3.88	2.03	1.62	2.14	2.48	3.52
1936.....	20.86	2.07	2.56	2.29	2.11	3.25	1.60	1.31	1.06	1.24	1.19	1.16	1.02
Total separation rate:													
1930.....	56.31	4.88	4.50	5.16	5.31	4.98	4.81	5.80	5.62	4.78	3.98	3.75	2.74
1931.....	53.45	4.00	3.21	3.72	4.59	4.20	3.95	4.95	4.24	4.39	5.47	5.20	5.53
1932.....	62.58	3.83	3.69	4.55	7.98	7.47	11.26	5.31	2.77	3.28	3.26	4.65	4.53
1933.....	56.49	3.85	5.24	5.43	3.86	3.36	3.74	5.25	5.72	5.00	4.40	6.07	4.48
1934.....	57.36	3.85	3.20	3.38	3.68	7.24	6.69	3.09	3.51	9.28	4.80	5.31	3.33
1935.....	56.11	3.34	3.62	5.71	5.45	5.27	7.66	6.02	3.75	3.24	3.66	3.84	4.55
1936.....	41.41	3.32	3.89	3.75	3.82	4.76	3.29	3.29	3.09	3.67	3.41	2.64	2.48
Accession rate:													
1930.....	41.97	4.50	3.33	4.17	4.27	3.95	3.25	2.47	2.72	4.58	4.34	2.93	1.46
1931.....	47.38	3.57	3.91	4.47	4.60	3.51	2.66	4.62	4.70	4.36	3.84	4.15	2.90
1932.....	67.48	5.25	4.73	3.50	2.27	1.96	2.51	7.68	12.41	12.92	5.80	4.49	3.96
1933.....	83.56	4.88	3.82	3.46	7.35	13.48	14.09	17.54	5.21	4.70	3.59	2.86	2.58
1934.....	53.69	6.57	5.90	4.86	3.35	3.18	3.54	3.67	3.03	3.60	8.05	3.93	4.01
1935.....	52.33	4.74	3.56	3.92	2.99	2.65	3.46	4.68	5.50	6.68	5.82	4.17	4.16
1936.....	49.81	3.77	3.18	2.97	3.79	3.46	4.70	5.18	5.46	5.02	4.24	4.51	3.53

¹ Including temporary, indeterminate, and permanent lay-offs.

ELECTRICAL MACHINERY

For 4 consecutive years the accession rates in plants manufacturing electrical machinery and supplies were higher than the total separation rates (table 9). In 1936 the total separation rate was 26.77 per 100 employees and the accession rate was 53.10. The annual quit and discharge rates were lower each year than in all

* See Monthly Labor Review for March 1937 (pp. 680-685).

manufacturing. In 1936, however, the quit rate was 10.32, as compared with 7.01 in 1935. Labor disputes in some of the plants accounted for part of this increase. The lay-off rate declined steadily from 51.97 in 1932 to 14.62 in 1936. The highest monthly lay-off rate (16.50 per 100 employees) was reported in June 1932. The highest accession rate (8.95) was reported in May 1933; the lowest (0.33) in February 1932.

TABLE 9.—Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Electrical Machinery Industry, January 1932 to December 1936

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1932-----	5.07	0.44	0.40	0.41	0.74	0.53	0.52	0.33	0.41	0.35	0.29	0.26	0.39
1933-----	7.12	.30	.31	.35	.35	.48	.96	1.19	.98	.97	.46	.37	.40
1934-----	5.77	.40	.56	.49	.56	.56	.50	.34	.49	.53	.48	.46	.40
1935-----	7.01	.45	.41	.50	.58	.56	.59	.61	.68	.79	.70	.65	.49
1936-----	10.32	.61	.65	.76	.86	.91	.98	.83	.74	1.33	.98	.81	.86
Discharge rate:													
1932-----	1.22	.10	.18	.06	.09	.07	.14	.14	.05	.06	.14	.09	.10
1933-----	1.16	.03	.03	.08	.08	.11	.24	.16	.11	.10	.08	.07	.07
1934-----	1.43	.13	.10	.12	.15	.16	.16	.11	.12	.09	.09	.09	.11
1935-----	1.40	.09	.12	.12	.12	.15	.12	.09	.12	.10	.15	.10	.12
1936-----	1.83	.11	.08	.16	.23	.11	.13	.15	.10	.18	.19	.17	.22
Lay-off rate: ¹													
1932-----	51.97	.93	1.07	1.85	5.30	4.00	16.50	3.59	7.00	6.25	2.13	1.19	1.26
1933-----	27.99	3.15	2.54	3.53	1.40	1.33	.86	9.29	.98	.52	1.18	1.73	1.48
1934-----	21.34	1.50	.09	.69	.63	.97	1.05	4.72	4.67	1.40	1.95	1.80	1.27
1935-----	18.42	1.05	.71	.98	1.40	5.70	3.37	1.19	.52	.80	.39	.91	1.40
1936-----	14.62	3.02	2.80	1.15	.93	.74	1.99	.91	.35	.52	.51	.52	1.18
Total separation rate:													
1932-----	58.26	1.47	1.65	2.32	6.13	4.60	17.16	4.06	8.36	6.66	2.56	1.54	1.75
1933-----	36.27	3.48	2.88	3.96	1.83	1.92	2.06	10.64	2.07	1.59	1.72	2.17	1.95
1934-----	28.54	2.03	1.35	1.30	1.34	1.69	1.71	5.17	5.28	2.02	2.52	2.35	1.78
1935-----	26.83	1.59	1.24	1.60	2.10	6.41	4.08	1.89	1.32	1.69	1.24	1.66	2.01
1936-----	26.77	3.74	3.53	2.07	2.02	1.76	3.10	1.80	1.19	2.03	1.68	1.50	2.26
Accession rate:													
1932-----	11.86	.51	.33	.58	.63	.58	.79	.49	.85	1.22	2.07	2.21	1.60
1933-----	49.02	.57	1.05	1.65	3.74	8.95	6.57	3.84	7.24	5.11	3.69	4.18	2.43
1934-----	32.72	2.51	3.66	4.93	2.61	3.51	3.31	1.91	2.78	1.35	1.43	2.09	2.63
1935-----	38.44	3.62	3.38	3.56	2.53	2.02	3.13	3.06	3.97	3.67	2.78	2.85	
1936-----	53.10	2.95	2.43	4.93	5.61	5.42	4.92	3.56	4.10	4.84	5.69	4.91	3.74

¹ Including temporary, indeterminate, and permanent lay-offs.

FOUNDRIES AND MACHINE SHOPS

In 1931 there were 53 separations per 100 employees in foundries and machine shops (table 10). Lay-offs accounted for the largest proportion of the separations. Quits and discharges, however, represented approximately one-fifth of the total separations. In 1932, when the total separation rate was somewhat more than 46 per 100 employees, the quits and discharges were one-ninth of the total separations. From 1933 to 1936 the quit and discharge rates increased sharply. Quits and discharges accounted for approximately 50 percent of total separations in 1936. The total separation rate in 1936 was 36.68, the lowest rate shown in the 6-year period covered by the study.

In a special study of labor turn-over in 373 identical foundries and machine shops during the years 1931 and 1932⁵ turn-over rates in

⁵ See *Monthly Labor Review* for February 1934 (pp. 347-351).

plants with less than 100 employees were compared with rates in plants having 100 employees or more. The smaller establishments employed 13.4 percent and 12.3 percent of the total number of employees in 1931 and 1932, respectively. In 1931 the larger establishments employed 86.6 percent, and in 1932, 87.7 percent, of the total number of employees. A separation rate of 63.62 per 100 employees and an accession rate of 36.74 were reported for establishments with less than 100 workers, in 1931. The larger firms had a total separation rate of 48.20 in 1931 and an accession rate of 27.63. The total separation rate for the smaller firms was 71.20 in 1932 and the accession rate was 42.32. For the larger firms these rates in 1932 were 42.82 and 26.41 respectively.

TABLE 10.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in Foundries and Machine Shops, February 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	(1)	1.36	1.88	1.88	1.87	1.29	1.11	1.01	1.07	0.85	0.66	0.55	
1931	7.58	0.52	.55	.90	.96	.77	.69	.68	.55	.70	.56	.39	.31
1932	3.71	.42	.36	.46	.29	.39	.31	.20	.27	.27	.23	.22	.20
1933	6.19	.24	.22	.26	.33	.38	.63	.72	.89	.82	.54	.53	.63
1934	8.20	.66	.75	1.38	.90	.79	.66	.52	.56	.51	.56	.46	.45
1935	9.06	.61	.71	.70	.78	.74	.86	.77	.80	.98	.79	.75	.57
1936	13.92	.66	.74	1.07	1.17	1.59	1.17	1.16	1.46	1.54	1.15	1.08	1.13
Discharge rate:													
1930	(1)	.80	.88	.80	.79	.54	.43	.45	.44	.47	.22	.26	
1931	2.74	.22	.22	.25	.36	.25	.25	.20	.22	.30	.16	.19	.12
1932	1.23	.15	.12	.12	.12	.14	.12	.08	.09	.08	.06	.07	.08
1933	2.00	.04	.07	.09	.08	.16	.25	.19	.28	.27	.24	.17	.16
1934	2.37	.19	.17	.26	.28	.29	.25	.20	.15	.13	.16	.17	.12
1935	3.07	.21	.23	.24	.30	.25	.39	.19	.25	.23	.30	.25	.23
1936	3.70	.28	.26	.29	.29	.28	.41	.35	.32	.34	.28	.29	.31
Lay-off rate: ¹													
1930	(1)	2.03	3.24	2.87	4.12	4.52	4.58	4.08	3.82	4.01	2.87	3.10	
1931	43.35	2.32	2.10	2.72	3.29	4.91	4.44	4.71	3.78	3.13	4.45	3.82	3.68
1932	41.45	3.14	2.98	3.55	4.27	3.93	4.74	3.43	3.24	3.34	2.42	3.29	3.12
1933	31.36	2.62	3.72	2.83	2.24	1.50	1.84	1.56	1.91	2.42	3.26	4.34	3.12
1934	37.76	2.49	1.55	1.87	1.83	3.61	4.27	2.80	3.94	5.62	4.63	2.78	2.37
1935	28.51	2.08	2.00	1.96	2.74	3.23	3.55	3.11	2.06	1.76	2.40	1.65	1.97
1936	19.06	2.50	1.91	1.32	1.25	1.65	1.49	1.58	1.90	1.71	1.32	1.31	1.12
Total separation rate:													
1930	(1)	4.19	6.00	5.55	6.78	6.35	6.12	5.54	5.33	5.33	3.75	3.91	
1931	53.67	3.06	2.87	3.87	4.61	5.93	5.38	5.59	4.55	4.13	5.17	4.40	4.11
1932	46.39	3.71	3.46	4.13	4.68	4.46	5.17	3.80	3.60	3.69	2.71	3.58	3.40
1933	39.55	2.90	4.01	3.18	2.65	2.04	2.72	2.47	3.08	3.51	4.04	5.04	3.91
1934	48.33	3.34	2.47	3.51	3.01	4.69	5.18	3.52	4.65	6.26	5.35	3.41	2.94
1935	40.64	2.90	2.94	2.90	3.82	4.22	4.80	4.07	3.11	2.97	3.49	2.65	2.77
1936	36.68	3.44	2.91	2.68	2.71	3.52	3.07	3.09	3.68	3.59	2.75	2.68	2.56
Accession rate:													
1930	(1)	4.30	4.63	3.95	3.76	3.05	2.26	2.56	2.45	2.27	1.85	2.05	
1931	30.81	2.93	2.96	3.38	3.08	2.94	1.95	2.63	2.20	3.04	2.36	1.89	1.95
1932	30.23	3.23	2.52	2.94	2.00	2.54	1.88	2.14	2.35	3.27	2.64	2.44	2.28
1933	63.40	2.71	1.73	2.12	4.38	5.69	8.80	10.05	10.55	6.54	4.44	3.32	3.07
1934	58.88	6.25	6.34	7.48	6.46	4.95	4.19	3.58	2.72	2.60	4.19	4.10	6.02
1935	53.62	6.77	5.29	5.35	4.70	3.72	3.47	3.65	4.22	4.29	4.52	4.51	3.13
1936	56.12	3.65	3.72	5.17	5.85	4.74	5.25	4.77	4.18	4.31	4.76	4.47	5.25

¹ No data collected.

² Including temporary, indeterminate, and permanent lay-offs.

FURNITURE

High lay-off rates and low accession rates were shown with few exceptions in the furniture industry during October, November, and December (table 11). New models were manufactured in these

months to be shown at the annual furniture shows. As a result, only the employees necessary to produce new models and to manufacture furniture to fill back orders were retained. After the introduction of new models, the accession rate increased until the peak of the season, which usually occurred late in the summer.

The annual quit rates in furniture manufacturing were somewhat lower than for all manufacturing from 1931 to 1935, inclusive. In 1936 labor disputes in some of the plants accounted for a sharp increase in the quit rate (15.72). From 1933 to 1936 discharge rates were higher for the furniture industry than for all manufacturing. Lay-off rates and total separation rates were likewise higher. During 1931, 1932, and 1934 the total separation rates exceeded the accession rates. In 1933, 1935, and 1936, however, the hiring rates were higher than the separation rates.

TABLE 11.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Furniture Industry, April 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930		(1)	(1)	(1)	1.73	1.26	1.44	1.21	1.18	1.09	1.03	0.99	0.68
1931	9.71	0.55	0.57	0.80	.95	1.05	1.06	.81	1.13	.94	.96	.49	.40
1932	5.20	.38	.63	.64	.53	.47	.36	.52	.42	.54	.22	.28	.21
1933	9.31	.34	.23	.31	.75	1.36	1.22	1.02	1.07	1.21	.68	.61	.51
1934	7.42	.58	.59	.49	.62	.60	.86	.49	.41	1.45	.50	.43	.31
1935	8.57	.40	.46	.72	.60	.62	.53	.61	.60	2.23	.71	.64	.45
1936	15.72	1.05	.54	.81	.93	1.73	1.18	1.29	1.74	1.91	1.79	1.43	1.32
Discharge rate:													
1930		(1)	(1)	(1)	.64	.52	.41	.40	.41	.46	.45	.29	.35
1931	4.02	.25	.34	.37	.51	.25	.43	.30	.31	.26	.29	.38	.33
1932	1.79	.16	.34	.27	.15	.16	.12	.10	.07	.11	.12	.12	.07
1933	3.72	.14	.26	.12	.08	.11	.16	.28	.42	.53	.79	.51	.32
1934	2.77	.27	.23	.25	.22	.21	.27	.37	.18	.22	.18	.15	.22
1935	2.72	.28	.20	.25	.19	.18	.17	.24	.22	.23	.26	.29	.21
1936	3.90	.15	.19	.17	.25	.37	.34	.40	.44	.44	.36	.42	.37
Lay-off rate: ¹													
1930		(1)	(1)	(1)	4.38	4.39	4.33	4.50	3.45	3.30	3.61	5.92	6.66
1931	50.96	4.84	3.86	4.52	3.31	5.72	4.83	3.83	3.03	2.95	3.88	5.17	5.02
1932	54.88	5.86	4.35	6.10	5.72	5.95	6.86	4.96	2.44	1.50	2.00	3.07	5.89
1933	53.28	5.61	3.29	5.78	2.68	5.56	2.67	1.60	1.36	2.02	3.83	10.36	12.52
1934	50.24	5.24	4.03	3.97	4.66	4.48	3.71	3.08	3.43	3.57	3.62	4.44	6.01
1935	33.91	3.45	2.36	2.37	3.82	2.66	2.64	1.69	1.81	1.56	2.24	3.31	6.00
1936	32.38	3.57	2.32	3.16	3.09	1.97	1.98	1.82	1.41	1.84	2.84	2.91	5.47
Total separation rate:													
1930		(1)	(1)	(1)	6.75	6.17	6.18	6.11	5.04	4.85	5.09	7.20	7.69
1931	64.69	5.64	4.77	5.69	4.77	7.02	6.32	4.94	4.47	4.15	5.13	6.04	5.75
1932	61.87	6.40	5.32	7.10	6.40	6.58	7.34	5.58	2.93	2.24	2.34	3.47	6.17
1933	66.31	6.09	3.78	6.21	3.51	3.03	4.05	2.90	2.85	3.76	5.30	11.48	13.35
1934	60.43	6.09	4.85	4.71	5.50	5.29	4.84	3.94	4.02	5.24	4.39	5.02	6.54
1935	45.20	4.13	3.02	3.34	4.61	3.46	3.34	2.54	2.63	4.02	3.21	4.24	6.66
1936	52.00	4.77	3.05	4.14	4.27	4.07	3.50	3.51	3.59	4.19	4.99	4.76	7.16
Accession rate:													
1930		(1)	(1)	(1)	3.34	2.87	3.82	5.09	5.34	7.07	3.72	2.48	2.35
1931	55.55	5.24	5.51	4.78	4.66	3.81	4.89	5.62	4.89	5.77	4.36	2.91	3.11
1932	60.36	4.00	4.69	3.63	3.70	3.44	3.21	3.74	6.59	7.50	5.05	1.76	3.05
1933	85.81	3.36	3.31	1.88	8.85	10.09	9.37	12.42	15.73	11.43	3.87	2.73	2.77
1934	58.60	5.52	5.14	5.40	4.25	5.54	6.38	6.37	4.70	4.44	3.52	3.33	4.01
1935	57.28	6.50	5.41	5.46	3.08	3.75	4.55	6.47	5.93	5.90	5.71	2.38	2.14
1936	68.98	5.28	3.13	3.45	3.72	7.27	8.58	7.48	8.46	7.81	6.31	4.36	3.13

¹ No data collected.

² Including temporary, indeterminate, and permanent lay-offs.

HARDWARE

The accession rates in the hardware industry in 1933, 1934, 1935, and 1936 were higher than the total separation rates (table 12).

The quit rate in 1936 was nearly twice as high as in 1933, and the discharge rate showed a substantial increase. The lay-off rate, on the other hand, dropped from 35.14 per 100 employees in 1932 to 8.03 in 1935. The accession rate was approximately four times as high in 1935 as in 1932.

TABLE 12.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Hardware Industry, January 1932 to December 1936*

Class of rate and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1932.....	4.65	0.57	0.40	0.31	0.36	0.43	0.31	0.47	0.30	0.49	0.35	0.39	0.27
1933.....	5.96	.31	.68	.30	.16	.54	.30	.28	.72	.44	.98	.63	.62
1934.....	6.71	.51	.64	.67	.82	.68	.68	.41	.60	.49	.45	.38	.38
1935.....	10.86	.76	.57	.94	.66	.60	1.00	.97	.81	1.93	1.11	.84	.67
1936.....	10.13	.40	.52	.62	.86	1.28	.72	.72	.74	.92	1.15	1.33	.87
Discharge rate:													
1932.....	.90	.08	.09	.06	.20	.09	.11	0.00	.03	.02	.12	.03	.07
1933.....	1.12	0.00	.05	.07	0.00	.04	.10	.18	.14	.14	.06	.20	.14
1934.....	1.28	.20	.22	.23	.09	.15	.06	.06	.08	.06	.05	.04	.04
1935.....	4.02	.68	.50	.14	.14	.28	.14	.27	.23	.89	.20	.32	.23
1936.....	2.15	.12	.11	.15	.31	.29	.13	.13	.13	.09	.25	.34	.10
Lay-off rate: ¹													
1932.....	35.14	1.89	3.58	3.99	3.38	7.34	2.72	7.81	.74	.61	.60	.97	1.42
1933.....	19.14	2.24	1.98	1.71	3.59	.56	.71	.51	.92	2.15	.58	3.29	.90
1934.....	14.77	.89	1.26	.92	1.53	2.02	.96	2.36	2.24	.38	.86	.81	.54
1935.....	8.03	.42	.38	.84	.72	.49	.41	.17	.48	.20	.29	2.89	.74
1936.....	13.28	3.07	1.85	1.14	1.33	.54	1.87	.69	.37	.35	.34	.56	1.17
Total separation rate:													
1932.....	40.69	2.54	4.07	4.36	3.94	7.86	3.14	8.28	1.07	1.12	1.16	1.39	1.76
1933.....	26.22	2.55	2.71	2.08	3.75	1.14	1.11	.97	1.78	2.73	1.62	4.12	1.66
1934.....	22.76	1.60	2.12	1.82	2.44	2.85	1.70	2.83	2.92	.93	1.36	1.23	.96
1935.....	22.91	1.86	1.45	1.92	1.52	1.37	1.55	1.41	1.52	3.02	1.60	4.05	1.64
1936.....	25.56	3.59	2.48	1.91	2.50	2.11	2.72	1.54	1.24	1.36	1.74	2.23	2.14
Accession rate:													
1932.....	12.14	1.71	.98	.33	.45	1.68	.79	1.25	.44	.90	1.23	1.80	.49
1933.....	29.65	1.17	1.76	.96	.62	2.52	2.94	5.18	5.56	2.23	3.81	1.20	1.70
1934.....	27.68	5.82	4.26	5.59	2.32	1.33	1.62	.80	.62	1.00	1.08	1.85	1.39
1935.....	49.35	2.27	.83	4.43	5.84	8.05	4.90	2.75	6.68	5.61	5.33	1.52	1.05
1936.....	43.25	2.07	3.02	2.70	2.24	2.25	1.56	2.48	4.21	4.09	6.95	6.60	5.08

¹ Including temporary, indeterminate, and permanent lay-offs.

IRON AND STEEL

Labor turn-over reports received by the Bureau of Labor Statistics from iron and steel plants covered approximately 250,000 workers. This was 70 percent of the number of workers employed in iron and steel plants in 1936, estimated on the basis of the 1935 Census of Manufactures.

The average annual total separation rate over the 7-year period was 30.4 per 100 employees (table 13) and the average accession rate was 32.9. Quits, discharges, and lay-offs were less than one-third of the average number of workers, and replacements were slightly higher.

In 1930 the quit rate was 19.55. The lowest quit rate occurred in 1932. From 7.10 in 1932 the quit rate increased gradually to 12.48 in 1936. There was a marked decrease in the discharge rates. The discharge rate dropped from 3.70 per 100 employees in 1930 to 0.66 in 1932. The lay-off rate was 26.89 in 1932 and 8.52 in 1936.

When lay-offs and quits were compared with total separations, voluntary separations were slightly more than three-sevenths and

lay-offs slightly less than one-half of the total separations in 1930. In 1932 quits accounted for approximately one-fifth and lay-offs for four-fifths of the total separations. Approximately 12 quits were reported for every 8 lay-offs in 1936.

TABLE 13.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Iron and Steel Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	19.55	1.81	1.91	1.91	2.26	2.13	1.87	1.54	1.61	1.45	1.13	1.11	0.82
1931	9.39	.71	.72	.71	.89	.87	.86	.94	1.03	.79	.78	.64	.54
1932	7.10	.55	.55	.53	1.37	.53	.94	.43	.56	.36	.38	.36	.54
1933	7.67	.38	.25	.31	.34	.34	.90	.84	1.15	.97	.85	.73	.61
1934	8.92	.82	.67	.73	1.00	.86	1.12	.56	.94	.60	.63	.62	.37
1935	9.42	.57	.73	.75	.62	.77	.86	.73	.92	.85	1.12	.79	.71
1936	12.48	.76	.67	.75	.79	.97	1.00	1.05	1.29	1.47	1.39	1.33	1.01
Discharge rate:													
1930	3.70	.45	.34	.45	.42	.40	.49	.24	.26	.22	.20	.13	.10
1931	1.24	.09	.15	.12	.15	.15	.11	.12	.10	.08	.06	.06	.05
1932	.66	.05	.07	.04	.11	.07	.05	.03	.05	.05	.05	.04	.05
1933	1.28	.03	.04	.03	.06	.07	.14	.23	.23	.17	.12	.09	.07
1934	1.07	.08	.07	.13	.11	.11	.09	.11	.16	.04	.04	.07	.06
1935	1.02	.07	.07	.06	.06	.05	.15	.08	.10	.09	.11	.08	.10
1936	1.10	.11	.08	.10	.08	.09	.10	.07	.08	.13	.10	.07	.09
Lay-off rate: ¹													
1930	21.83	1.24	1.15	1.22	1.32	1.71	2.25	2.29	2.05	2.16	2.25	1.95	2.23
1931	21.18	1.36	1.03	1.38	1.90	2.16	2.65	1.74	2.67	1.66	1.41	1.80	1.42
1932	26.89	1.48	1.72	1.03	5.68	4.94	3.30	2.25	1.56	.65	1.45	1.23	1.60
1933	17.52	2.20	1.88	1.48	.91	.99	.73	.37	.94	1.19	2.22	2.87	1.74
1934	19.91	1.45	.82	.57	.52	.67	1.17	3.74	2.84	3.39	1.70	1.78	1.36
1935	12.44	.54	.62	.89	1.27	.70	1.59	.78	1.45	.96	1.29	1.35	1.00
1936	8.52	1.37	1.24	.68	.44	.61	.46	.47	.39	.62	.93	.77	.54
Total separation rate:													
1930	45.07	3.50	3.40	3.58	4.00	4.24	4.61	4.07	3.92	3.83	3.58	3.19	3.15
1931	31.81	2.16	1.90	2.21	2.94	3.18	3.62	2.80	3.80	2.53	2.25	2.50	2.01
1932	34.65	2.08	2.34	1.60	7.16	5.54	4.29	2.71	2.17	1.06	1.88	1.63	2.19
1933	26.47	2.61	2.17	1.82	1.31	1.40	1.77	1.44	2.32	2.33	3.19	3.69	2.42
1934	29.90	2.35	1.56	1.43	1.63	1.64	2.38	4.41	3.94	4.03	2.37	2.47	1.79
1935	22.88	1.18	1.42	1.70	1.95	1.52	2.60	1.59	2.47	1.90	2.52	2.22	1.81
1936	22.10	2.24	1.99	1.53	1.31	1.67	1.56	1.50	1.76	2.22	2.42	2.17	1.64
Accession rate:													
1930	35.31	5.52	5.09	4.06	3.88	3.25	2.56	2.27	1.91	2.32	1.74	1.31	1.40
1931	20.12	2.52	2.24	2.03	1.69	1.57	1.20	2.32	.94	1.41	1.51	1.78	.91
1932	17.86	1.71	1.27	1.34	2.77	.68	1.06	1.77	1.32	1.17	2.08	.61	2.08
1933	54.91	1.47	2.05	.73	2.67	5.86	12.25	13.75	8.43	3.74	1.79	.84	1.33
1934	33.98	2.48	3.25	4.85	5.44	5.44	3.72	1.12	1.07	.98	1.92	1.65	2.06
1935	29.58	5.13	2.78	1.78	1.26	1.55	1.10	2.64	4.03	2.61	2.50	2.51	1.69
1936	38.85	1.87	1.67	2.51	5.43	3.99	4.61	4.42	3.31	2.93	3.04	2.22	2.85

¹ Including temporary, indeterminate, and permanent lay-offs.

MEN'S CLOTHING

During 1932, 1935, and 1936 the highest lay-off rates in the men's clothing industry were reported for April and May (table 14). No definite seasonal trend, however, was shown in the accession rates. The highest hiring rate occurred during the summer months in 1932, 1933, and 1936. In 1934 and 1935 the highest rate occurred in mid-winter.

The quit rates were greatest during the summer months and smallest in the fall and winter months. During the 5-year period, 1932 to 1936, the total separation rate was less than 50 percent of the

average total number of workers on the pay roll. In 1936 the hiring rate was more than 50 percent of the number of workers on the pay roll.

TABLE 14.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Men's Clothing Industry, April 1931 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1931	(1)	(1)	(1)	1.40	1.39	1.32	1.12	1.30	1.27	0.95	0.66	0.84	
1932	11.25	1.06	0.98	0.94	1.06	1.13	.88	.75	.65	1.52	.58	.66	1.04
1933	9.92	.45	.66	.63	.75	.79	.99	1.32	1.22	.77	.85	.89	.60
1934	9.20	.75	.68	.59	.81	.92	1.13	1.07	1.05	.72	.64	.42	.42
1935	9.47	.76	.72	.83	.90	.67	.74	.95	.93	.85	.83	.77	.52
1936	10.50	.73	.65	.80	.93	.92	.94	1.08	1.03	1.07	.90	.66	.79
Discharge rate:													
1931	(1)	(1)	(1)	.12	.15	.23	.23	.12	.12	.13	.07	.09	
1932	1.07	.08	.11	.11	.05	.05	.03	.04	.04	.07	.03	.05	.41
1933	1.43	.07	.03	.04	.22	.10	.11	.12	.23	.18	.12	.15	.06
1934	1.16	.11	.10	.12	.09	.17	.15	.09	.07	.07	.07	.06	.06
1935	1.41	.10	.17	.21	.18	.18	.07	.10	.15	.09	.06	.05	.05
1936	.98	.08	.13	.07	.04	.05	.07	.11	.08	.09	.11	.09	.06
Lay-off rate: ²													
1931	(1)	(1)	(1)	2.20	1.46	.56	.97	1.51	1.26	1.50	5.38	5.44	
1932	31.69	1.22	1.84	2.40	6.63	4.91	3.38	1.44	.72	.56	.93	3.31	4.35
1933	26.80	1.72	1.20	2.82	.83	1.82	.56	.81	3.32	2.77	1.85	4.44	4.66
1934	31.48	2.54	.72	.85	1.47	4.09	1.68	2.15	1.57	5.43	2.23	3.73	5.02
1935	28.86	.96	1.08	1.35	3.44	4.97	3.73	1.51	1.23	1.56	2.54	2.66	3.83
1936	34.36	1.57	1.35	1.86	7.65	3.88	3.45	1.75	.83	2.03	4.28	2.16	3.55
Total separation rate:													
1931	(1)	(1)	(1)	3.72	3.00	2.11	2.32	2.93	2.65	2.58	6.11	6.37	
1932	44.01	2.36	2.93	3.45	7.74	6.09	4.29	2.23	1.41	2.15	1.54	4.02	5.80
1933	38.15	2.24	1.89	3.49	1.80	2.71	1.66	2.25	4.77	3.72	2.82	5.48	5.32
1934	41.84	3.40	1.50	1.56	2.37	5.18	2.96	3.31	2.69	6.22	2.94	4.21	5.50
1935	39.74	1.82	1.97	2.39	4.52	5.82	4.54	2.56	2.31	2.50	3.43	3.48	4.40
1936	45.84	2.38	2.13	2.73	8.62	4.85	4.46	2.94	1.94	3.19	5.29	2.91	4.40
Accession rate:													
1931	(1)	(1)	(1)	3.22	3.10	4.05	4.16	3.05	1.74	2.10	1.62	3.66	
1932	45.73	6.20	2.05	1.89	1.77	2.33	2.22	6.04	7.90	7.45	2.72	3.05	2.11
1933	45.13	4.41	2.48	1.65	3.07	4.89	7.79	6.44	4.20	2.61	2.49	1.69	3.41
1934	38.81	5.42	5.60	3.25	2.37	1.86	4.01	2.57	2.21	2.36	3.02	3.03	3.02
1935	46.78	8.53	4.06	4.48	3.26	2.83	4.12	4.47	3.26	2.26	3.14	2.74	3.63
1936	52.16	6.82	3.21	2.45	1.94	5.64	6.87	5.49	3.97	2.44	4.57	3.71	5.05

¹ No data collected.

² Including temporary, indeterminate, and permanent lay-offs.

PETROLEUM REFINING

The annual quit rates in petroleum refining from 1932 to 1936 (table 15) were slightly more than one-half as high as the rates for all manufacturing. The monthly quit rates ranged from 0.23 in April 1933 to 1.09 in September 1936, the only month during 5 years when more than 1 worker per 100 employees quit. The annual lay-offs were less than one-third of the total number of employees. A comparison of total separation rates with accession rates showed that in 1933 and 1936 the accession rates exceeded the total separation rates. In 1933 the quit rate was 5.62 as compared with 4.82 in 1932. In 1936 the quit rate (7.41) was greater than in 1934 and 1935. The discharge rate, on the other hand, dropped from 1.26 in 1932 to 0.95 in 1933. The discharge rate was 1.37 in 1935 and 1.33 in 1936.

TABLE 15.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Petroleum Refining Industry, May 1931 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1931		(1)	(1)	(1)	(1)	0.64	0.69	0.48	0.59	0.72	0.33	0.49	0.39
1932	4.82	0.34	0.42	0.37	0.34	.36	.44	.46	.34	.64	.41	.31	.39
1933	5.62	.27	.29	.46	.23	.43	.88	.60	.60	.77	.30	.38	.41
1934	5.79	.50	.39	.42	.57	.44	.46	.39	.67	.64	.43	.47	.41
1935	5.74	.38	.32	.37	.38	.48	.51	.43	.61	.76	.62	.30	.49
1936	7.41	.56	.42	.60	.69	.76	.56	.48	.79	1.09	.54	.47	.45
Discharge rate:													
1931		(1)	(1)	(1)	(1)	.16	.16	.17	.12	.13	.11	.08	.10
1932	1.26	.12	.10	.08	.10	.14	.08	.17	.12	.09	.06	.12	.08
1933	.95	.04	.03	.03	.05	.04	.10	.07	.10	.06	.10	.13	.20
1934	1.68	.21	.16	.12	.14	.17	.14	.18	.16	.12	.11	.10	.07
1935	1.37	.11	.12	.15	.11	.05	.13	.15	.10	.10	.14	.12	.09
1936	1.33	.00	.13	.08	.09	.07	.12	.17	.08	.15	.18	.12	.05
Lay-off rate: ¹													
1931		(1)	(1)	(1)	(1)	3.14	2.77	2.98	3.05	4.07	1.77	1.34	1.42
1932	25.28	1.33	2.76	1.68	1.48	2.32	1.89	2.36	1.86	3.91	1.65	1.32	2.72
1933	19.89	2.94	2.74	3.61	1.02	1.01	1.66	1.53	.71	.63	1.60	1.39	1.05
1934	31.85	3.46	3.09	3.97	2.75	1.59	2.62	1.54	2.28	2.87	3.09	2.31	2.28
1935	25.03	3.33	1.83	2.00	1.29	2.43	1.27	1.76	1.66	2.37	2.43	2.27	2.39
1936	24.97	2.90	2.97	1.90	1.92	2.31	2.31	1.34	1.59	2.37	1.43	2.41	1.52
Total separation rate:													
1931		(1)	(1)	(1)	(1)	3.94	3.62	3.63	3.76	4.92	2.21	1.91	1.91
1932	31.36	1.79	3.28	2.13	1.92	2.82	2.41	2.99	2.32	4.64	2.12	1.75	3.19
1933	26.46	3.25	3.06	4.10	1.30	1.48	2.64	2.20	1.41	1.46	2.00	1.90	1.66
1934	39.32	4.17	3.64	4.51	3.46	2.20	3.22	2.11	3.11	3.63	3.63	2.88	2.76
1935	32.14	3.82	2.27	2.52	1.78	2.96	1.91	2.34	2.37	3.23	3.19	2.78	2.97
1936	33.71	3.55	3.52	2.58	2.70	3.14	2.99	1.99	2.46	3.61	2.15	3.00	2.02
Accession rate:													
1931		(1)	(1)	(1)	(1)	2.36	2.11	1.56	1.33	1.56	1.34	1.99	1.79
1932	23.94	1.95	1.00	1.22	.90	1.08	2.53	2.82	2.57	2.20	2.29	3.06	2.32
1933	44.46	3.25	2.54	3.12	2.66	2.67	2.32	3.61	9.31	4.84	3.87	4.40	1.87
1934	38.28	3.39	3.03	3.84	4.35	5.42	3.85	3.49	2.82	1.52	3.30	1.70	1.57
1935	31.55	3.00	2.08	2.36	2.14	3.63	3.52	3.62	2.27	2.45	2.28	1.68	2.52
1936	38.30	3.70	2.85	3.48	4.12	3.53	4.82	5.27	2.14	2.24	1.74	2.53	1.88

¹ No data collected.² Including temporary, indeterminate, and permanent lay-offs.

RUBBER TIRES

A study made by the Bureau of Labor Statistics of labor productivity in the automobile-tire industry during 1921 to 1931 showed that 42,691 employees were technologically displaced during the 10-year period.⁶ This displacement was essentially the result of small evolutionary changes in production. In 1926 one major change was introduced; the flat-drum process replaced the core process of tire building, thereby producing a large displacement of labor. The production of rubber tires, however, increased. As a result the difference between separations and accessions remained relatively small except in 1933 and 1936 when the accession rate showed sharp increases compared with other years included in the study (table 16).

The lowest total separation rate over the 5-year period was 25.24 in 1932 and the highest 31.45 in 1931. The total separation rate was 16.60 in 1936, as compared with 26.62 in 1935. The accession rate increased from 20.86 to 35.12 in 1936.

⁶ U. S. Bureau of Labor Statistics Bull. No. 585: Labor Productivity in the Automobile-Tire Industry Washington, 1933.

TABLE 16.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Rubber-Tire Industry, January 1931 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1931.....	10.30	0.64	0.70	0.92	0.83	1.11	1.64	1.00	0.72	0.70	0.86	0.65	0.53
1932.....	5.98	.49	.42	.49	.53	.49	.55	.39	.32	.57	.55	.52	.66
1933.....	8.93	.41	.46	.53	.55	.93	1.21	.94	.99	1.07	.83	.47	.54
1934.....	6.02	.55	.48	.58	.72	.60	.60	.49	.45	.49	.42	.33	.31
1935.....	5.32	.37	.38	.38	.47	.49	.42	.44	.42	.46	.46	.43	.60
1936.....	8.19	.31	.37	.48	.68	.55	.63	.64	.86	1.12	.82	.90	.83
Discharge rate:													
1931.....	1.60	.18	.15	.12	.07	.19	.34	.12	.16	.08	.08	.04	.07
1932.....	1.11	.05	.03	.08	.07	.07	.08	.06	.09	.10	.10	.19	.19
1933.....	1.58	.09	.09	.05	.14	.12	.22	.18	.20	.12	.13	.13	.11
1934.....	.69	.07	.06	.09	.07	.05	.09	.06	.05	.04	.04	.06	.01
1935.....	.62	.04	.05	.03	.03	.04	.04	.02	.05	.03	.07	.04	.18
1936.....	.91	.03	.04	.05	.05	.05	.09	.09	.09	.07	.14	.11	.10
Lay-off rate: ¹													
1931.....	19.55	2.38	2.08	1.62	1.93	1.25	2.32	1.62	1.53	1.60	1.71	.91	.51
1932.....	18.15	.61	.93	1.15	2.34	.88	1.28	2.71	3.55	2.60	.75	.60	.75
1933.....	19.07	1.04	1.33	2.17	.75	.36	.19	.30	1.97	3.57	3.31	3.02	1.06
1934.....	22.79	.65	.51	.42	.97	1.47	2.06	3.58	5.22	3.98	3.01	.72	.20
1935.....	20.68	.42	.60	1.69	1.55	1.56	1.87	2.25	1.33	1.84	1.84	1.16	4.57
1936.....	7.50	1.24	1.27	.80	.42	.68	1.08	.44	.60	.17	.33	.19	.28
Total separation rate:													
1931.....	31.45	3.20	2.93	2.66	2.83	2.55	4.30	2.74	2.41	2.47	2.65	1.60	1.11
1932.....	25.24	1.15	1.38	1.72	2.94	1.44	1.91	3.16	3.96	3.27	1.40	1.31	1.60
1933.....	29.58	1.54	1.88	2.75	1.44	1.41	1.62	1.42	3.16	4.76	4.27	3.62	1.71
1934.....	29.50	1.27	1.05	1.09	1.76	2.12	2.75	4.13	5.72	4.51	3.47	1.11	.52
1935.....	26.62	.83	1.03	2.10	2.05	2.09	2.33	2.71	1.80	2.33	2.37	1.63	5.35
1936.....	16.60	1.58	1.68	1.33	1.15	1.28	1.80	1.17	1.55	1.36	1.29	1.20	1.21
Accession rate:													
1931.....	21.21	1.46	.97	1.06	1.65	7.24	2.27	1.37	1.10	1.22	1.18	.73	.96
1932.....	15.24	2.16	1.25	1.09	1.00	1.11	1.61	.84	.54	1.83	2.04	1.17	.60
1933.....	62.43	1.71	1.02	.97	5.29	19.14	14.97	9.87	4.02	.70	1.39	1.06	2.39
1934.....	28.99	3.06	4.30	4.21	2.50	.96	1.30	1.13	1.07	1.57	.77	3.70	4.24
1935.....	20.86	3.16	1.70	1.43	1.54	.87	.87	1.39	1.37	1.69	2.12	1.17	3.55
1936.....	35.12	2.04	2.03	2.08	3.05	4.76	2.45	2.91	2.49	3.04	4.02	3.64	2.61

¹ Including temporary, indeterminate, and permanent lay-offs.

SAWMILLS

Inclement weather and fire hazards frequently result in temporary shut-downs in sawmills. Total separation and accession rates showed approximately a 100-percent turn-over in the working force (table 17). In 1930 the annual total separation rate was 121.15 and the accession rate was 89.61. No information was available as to what percentage of the total were hires or rehires. In 1936 the total separation rate had dropped to 77.68, the lowest point in 7 years with the exception of 1934 when the rate was 74.14. The accession rate was 82.56 per 100 employees in 1936.

TABLE 17.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in Sawmills, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930.....	36.06	3.80	3.39	3.89	4.28	3.51	2.93	2.68	3.01	2.90	2.26	1.93	1.39
1931.....	16.17	.97	1.22	1.74	1.79	1.73	1.13	1.35	2.03	1.45	1.23	.93	.60
1932.....	9.48	.94	.48	.89	.87	.76	.84	1.02	.93	.54	.84	.69	.68
1933.....	17.11	.78	.63	.99	1.60	1.40	1.09	1.77	2.04	2.48	1.37	1.00	1.27
1934.....	14.41	1.04	1.06	1.30	1.29	1.49	1.58	1.52	1.14	.95	1.16	.94	.94
1935.....	35.87	.95	.99	1.08	2.33	17.18	3.43	1.68	1.67	2.75	1.44	1.33	1.04
1936.....	21.54	1.21	1.13	1.57	2.04	1.89	2.68	2.53	2.11	2.53	1.62	1.17	1.06

TABLE 17.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in Sawmills, January 1930 to December 1936—Continued*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Discharge rate:													
1930	12.68	1.18	1.37	1.47	0.92	1.35	0.96	1.07	0.93	0.95	0.72	0.83	0.93
1931	5.53	.43	.50	.51	.46	.50	.33	.32	.95	.49	.51	.27	.26
1932	4.10	.39	.46	.39	.35	.30	.24	.15	.27	.24	.44	.44	.43
1933	5.09	.43	.32	.42	.25	.33	.51	.62	.53	.51	.41	.51	.25
1934	5.40	.61	.46	.51	.50	.51	.47	.33	.49	.50	.31	.43	.28
1935	4.36	.36	.28	.39	.35	.25	.30	.44	.48	.46	.42	.33	.30
1936	4.04	.34	.29	.31	.34	.35	.42	.40	.38	.39	.31	.24	.27
Lay-off rate: ¹													
1930	72.41	4.52	3.99	3.54	4.97	8.10	5.35	6.98	6.00	7.64	6.58	7.23	7.42
1931	85.89	8.02	4.56	4.56	7.17	6.43	8.70	5.35	6.01	8.09	7.69	8.65	10.66
1932	77.38	5.90	5.87	6.27	4.77	6.29	8.59	4.86	5.85	4.52	6.24	3.58	14.64
1933	51.94	4.50	5.14	6.32	2.98	2.23	1.98	2.01	3.54	4.31	4.97	5.72	8.24
1934	67.99	4.20	2.54	3.21	3.01	9.39	5.86	5.61	8.51	5.56	6.08	6.38	7.64
1935	53.20	3.04	3.22	4.79	3.89	3.88	3.53	3.61	3.92	3.90	5.44	6.53	7.45
1936	52.10	4.09	3.42	3.06	3.22	3.65	4.76	5.24	4.24	3.35	3.78	7.89	5.40
Total separation rate:													
1930	121.15	9.50	8.75	8.90	10.17	12.96	9.24	10.73	10.03	11.58	9.56	9.90	9.74
1931	107.59	9.42	6.28	6.81	9.42	8.66	10.16	7.02	8.99	10.03	9.43	9.85	11.52
1932	90.96	7.23	6.81	7.55	5.99	7.35	9.67	6.03	7.05	5.30	7.52	4.71	15.75
1933	74.14	5.71	6.09	7.73	4.83	3.96	4.18	4.40	6.11	7.30	6.75	7.32	9.76
1934	87.80	5.85	4.06	5.02	4.80	11.39	7.91	7.46	10.14	7.01	7.55	7.75	8.86
1935	93.43	4.35	4.49	6.26	6.57	21.31	7.26	5.73	6.07	7.11	7.30	8.19	8.79
1936	77.68	5.64	4.84	4.94	5.60	5.89	7.86	8.17	6.73	6.27	5.71	9.30	6.73
Accession rate:													
1930	89.61	9.39	9.11	7.91	9.66	10.09	5.85	6.17	6.71	6.93	8.32	4.96	4.51
1931	81.16	9.99	7.44	7.07	7.21	7.97	6.41	4.53	5.81	5.95	7.43	6.39	4.96
1932	75.30	7.24	5.60	6.86	7.61	6.45	6.37	4.91	4.98	8.78	6.95	5.26	4.29
1933	108.79	8.23	4.60	5.95	9.26	15.54	18.21	15.09	10.34	8.84	4.49	4.34	3.90
1934	93.35	8.31	10.82	11.62	11.15	7.55	7.63	6.38	6.21	6.76	7.27	4.35	5.30
1935	103.89	9.81	7.70	7.97	10.05	8.84	8.19	17.55	12.79	8.88	5.12	4.67	5.32
1936	82.56	8.33	5.84	9.86	8.90	8.51	6.13	7.03	7.08	7.86	4.48	3.08	5.46

Including temporary, indeterminate, and permanent lay-offs.

SLAUGHTERING AND MEAT PACKING

The seasonal character of the slaughtering and meat-packing industry is the principal reason for the high turn-over rates. Operations are governed by the livestock received at the stockyards. Since this number varies greatly from day to day and increases or decreases with the seasons, the number of men required each day for operating the plant varies considerably. During the 7-year period the turn-over in slaughtering and meat packing was more than three-fourths of the average total number of workers on the pay roll (table 18). In 1934 an annual total separation rate of 130.30 and an accession rate of 133.42 were reported. The total separation rate in 1936 was 88.37 and the accession rate was 99.37 per 100 employees. Lay-offs represented the greater part of total separations. In October 1934 more than one-fifth of the total number of workers were laid off. This was the greatest lay-off rate reported for any month during the 7-year period. Monthly lay-off rates of 10 percent or more of the total employees occurred frequently. In August 1933 the accession rate was 19.78, the highest monthly rate during the period covered by the study. From January 1930 to December 1936 the monthly hiring rate per 100 employees was 4.45 or more.

TABLE 18.—*Monthly and Annual Labor Turn-Over Rates (per 100 Employees) in the Slaughtering and Meat-Packing Industry, January 1930 to December 1936*

Class of rates and year	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Quit rate:													
1930	26.59	2.32	2.37	2.49	2.91	2.84	2.72	2.08	2.09	2.26	1.70	1.12	1.69
1931	15.61	1.29	1.56	1.41	1.42	1.35	1.36	1.38	1.18	1.27	1.06	1.24	1.09
1932	10.48	.91	1.34	.93	.95	.91	.95	.77	.74	.89	.75	.62	.72
1933	11.38	.64	.63	.59	.66	.95	1.13	1.16	1.40	1.63	.97	.81	.81
1934	13.72	.85	.80	.90	.81	1.06	1.26	1.33	1.80	2.11	1.39	.66	.75
1935	9.01	.67	.89	.61	.58	.75	.58	.72	1.13	.82	.77	.82	.67
1936	13.94	.69	.65	.81	.78	1.12	1.03	1.24	1.34	1.82	1.46	1.55	1.45
Discharge rate:													
1930	9.17	.91	.96	.86	.75	.79	.88	.79	.72	.65	.73	.56	.57
1931	5.47	.61	.68	.37	.47	.43	.52	.49	.39	.36	.37	.36	.42
1932	3.91	.36	.49	.34	.35	.31	.34	.34	.34	.36	.25	.21	.22
1933	4.58	.23	.27	.21	.30	.42	.48	.40	.48	.62	.35	.45	.37
1934	4.61	.26	.26	.32	.29	.37	.40	.40	.68	.46	.56	.35	.26
1935	2.80	.24	.26	.24	.28	.22	.20	.28	.24	.20	.21	.26	.17
1936	3.11	.18	.21	.21	.23	.25	.29	.29	.32	.23	.27	.31	.32
Lay-off rate: ¹													
1930	64.42	6.68	7.70	7.51	4.47	4.14	4.59	5.34	5.14	3.79	4.67	4.80	5.59
1931	60.18	4.40	6.48	6.88	5.02	4.13	3.90	5.59	4.56	3.78	4.43	4.72	6.29
1932	68.77	4.92	7.29	7.60	5.11	4.50	6.98	5.26	5.33	3.89	5.18	6.30	6.41
1933	70.33	4.37	6.53	5.00	3.84	3.96	3.24	5.29	4.83	7.00	8.73	7.70	9.84
1934	111.97	5.99	10.23	10.40	6.06	4.37	7.87	4.20	7.01	7.12	22.27	12.71	13.74
1935	94.18	14.49	12.15	9.87	8.19	7.00	4.90	5.55	6.65	6.10	5.09	6.47	7.72
1936	71.32	6.10	8.69	5.95	5.57	4.96	4.10	5.19	5.83	4.84	4.71	4.22	11.16
Total separation rate:													
1930	100.18	9.91	11.03	10.86	8.13	7.77	8.19	8.21	7.95	6.70	7.10	6.48	7.85
1931	81.26	6.30	8.72	8.66	6.91	5.91	5.78	7.46	6.13	5.41	5.86	6.32	7.80
1932	83.16	6.19	9.12	8.87	6.41	5.72	8.27	6.37	6.41	5.14	6.18	7.13	7.35
1933	86.29	5.24	7.43	5.80	4.80	5.33	4.85	6.85	6.71	9.25	10.05	8.96	11.02
1934	130.30	7.10	11.29	11.62	7.16	5.80	9.53	5.93	9.49	9.69	24.22	13.72	14.75
1935	105.99	15.40	13.30	10.72	9.05	7.97	5.68	6.55	8.02	7.12	6.07	7.55	8.56
1936	88.37	6.97	9.55	5.97	6.58	6.33	5.42	6.72	7.49	6.89	6.44	6.08	12.93
Accession rate:													
1930	92.21	10.02	7.39	5.23	8.47	9.01	10.34	6.92	6.34	7.33	7.62	7.30	6.24
1931	80.02	9.50	5.02	5.19	6.31	6.92	6.08	6.46	5.06	5.73	7.39	8.10	8.26
1932	75.92	6.09	6.14	4.45	5.92	7.60	7.11	6.83	6.15	7.21	6.29	6.18	5.95
1933	112.26	6.46	5.71	4.80	7.41	10.21	9.94	10.51	19.78	11.64	7.56	10.79	7.45
1934	133.42	10.69	9.14	7.02	6.76	10.97	11.95	15.41	15.30	16.35	9.16	11.57	9.10
1935	87.51	8.61	5.85	7.07	8.71	8.61	5.66	6.37	7.10	6.19	9.01	8.28	6.05
1936	99.37	10.71	7.10	6.52	6.61	9.21	8.41	10.60	8.58	6.53	6.34	11.56	7.20

¹ Including temporary, indeterminate, and permanent lay-offs.



LABOR TURN-OVER IN MANUFACTURING ESTABLISHMENTS, APRIL 1937

DECREASES in all classes of separations and accessions were indicated for April as compared with March by the Bureau of Labor Statistics' survey of labor turn-over in manufacturing establishments.

The accession rate declined from 4.74 per 100 employees in March to 4.04 in April. Despite this decrease the hiring rate continued to exceed the total separation rate.

The quit rate decreased from 1.43 to 1.38. The discharge rate was slightly lower than in the preceding month. The lay-off rate declined from 1.53 to 1.48, and the total separation rate from 3.20 to 3.09 per 100 employees.

Compared with the corresponding month of last year, increases were shown in the quit and discharge rates. The lay-off rate declined from 1.92 to 1.48. The accession rate decreased from 4.46 to 4.04 per 100 employees.

All Manufacturing

The Bureau of Labor Statistics' survey of labor turn-over covers more than 5,000 representative manufacturing establishments, which in April employed more than 2,500,000 workers. The rates represent the number of changes in personnel per 100 employees on the pay rolls during the month.

The rates shown in table 1 are compiled from reports received from representative plants in 144 industries. In the 16 industries for which separate rates are shown (see table 2), reports were received from representative plants employing at least 25 percent of the workers in each industry.

Table 1 shows, for manufacturing as a whole, the total separation rate subdivided into quit, discharge, and lay-off rates, and the accession rate for each month of 1936 and for the first 4 months of 1937. The average monthly rates for 1936 are also presented.

TABLE 1.—*Monthly Labor Turn-Over Rates (per 100 Employees) in Representative Factories in 144 Industries*

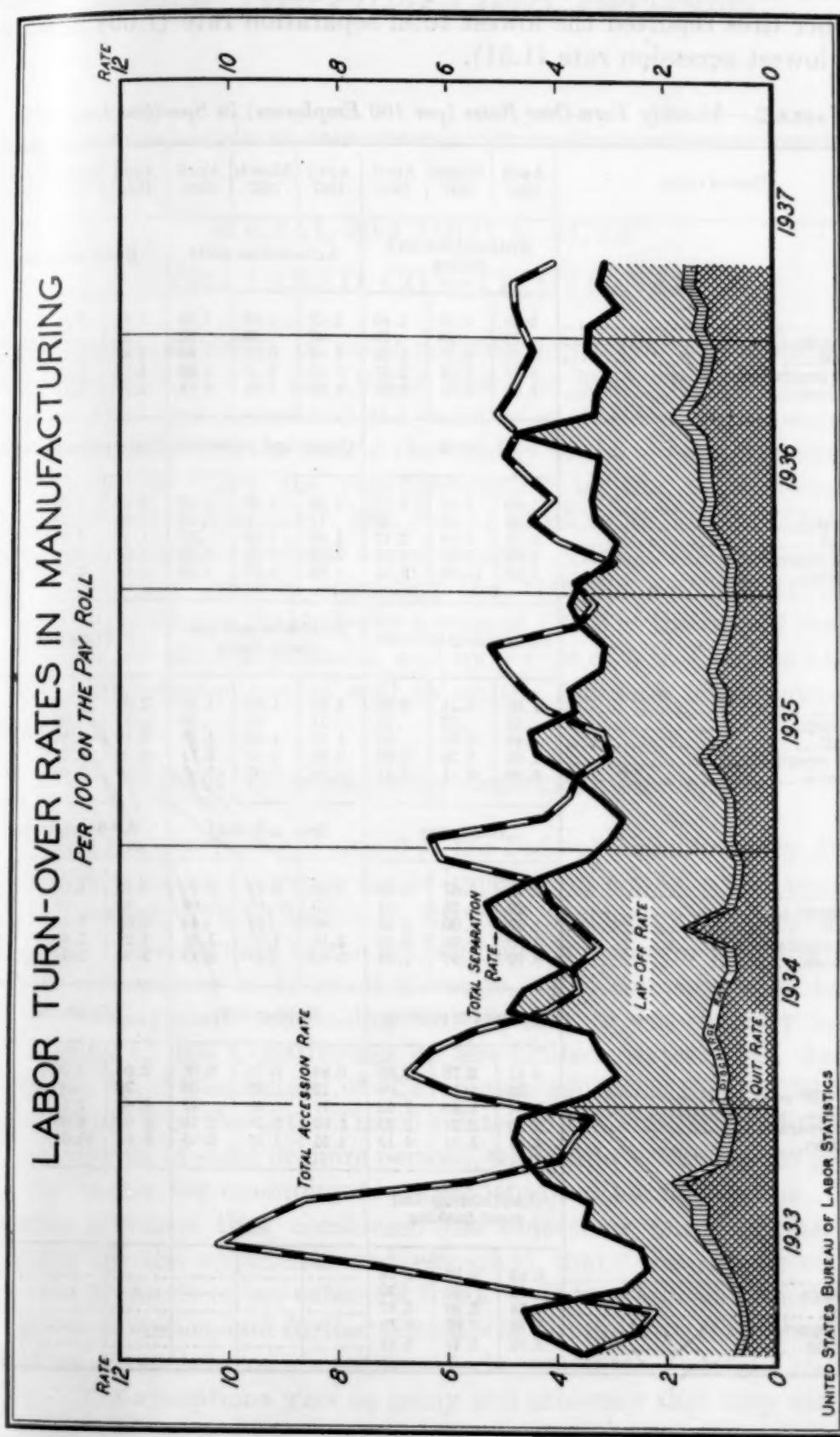
Class of rate and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
Quit rate:													
1937.....	1.27	1.19	1.43	1.38									
1936.....	.71	.68	.86	1.16	1.06	1.13	1.15	1.23	1.57	1.29	1.13	1.05	1.09
Discharge rate:													
1937.....	.21	.22	.24	.23									
1936.....	.20	.17	.19	.21	.20	.23	.23	.27	.26	.24	.21	.22	.22
Lay-off rate: ¹													
1937.....	1.90	1.44	1.53	1.48									
1936.....	2.66	2.21	1.83	1.92	2.06	1.92	1.84	3.23	1.47	1.72	1.70	2.14	2.06
Total separation rate:													
1937.....	3.38	2.85	3.20	3.09									
1936.....	3.57	3.06	2.88	3.29	3.32	3.28	3.22	4.73	3.30	3.25	3.04	3.41	3.37
Accession rate:													
1937.....	4.60	4.71	4.74	4.04									
1936.....	3.65	2.95	3.97	4.46	4.05	4.49	4.94	4.72	5.09	4.83	4.60	4.41	4.35

¹ Including temporary, indeterminate, and permanent lay-offs.

Sixteen Industries

In addition to the information for manufacturing as a whole, detailed labor turn-over rates are available for 16 separate manufacturing industries.

The automobile parts and equipment industry showed the heaviest turn-over during the month, having the highest quit rate (3.07), discharge rate (0.42), total separation rate (7.53), and accession rate (9.93). The lowest quit rate (0.41) and discharge rate (0.05) occurred in the petroleum-refining industry. The highest lay-off rate was



shown in slaughtering and meat-packing plants. Plants producing rubber tires reported the lowest total separation rate (1.09) and also the lowest accession rate (1.51).

TABLE 2.—*Monthly Turn-Over Rates (per 100 Employees) in Specified Industries*

Class of rates	April	March	April	April	March	April	April	March	April
	1937	1937	1936	1937	1937	1936	1937	1937	1936
Automobiles and bodies									
Automobile parts									
Quit	1.50	1.50	1.40	3.07	1.90	1.66	1.45	1.31	0.67
Discharge	.18	.23	.25	.42	.43	.32	.23	.26	.16
Lay-off	1.58	6.25	1.22	4.04	6.77	1.96	2.47	1.47	2.01
Total separation	3.35	7.98	2.87	7.53	9.10	3.94	4.15	3.04	2.84
Accession	7.63	4.61	5.81	9.93	7.92	6.64	1.77	3.18	1.11
Brick									
Cigars and cigarettes									
Quit	1.60	1.45	1.11	1.90	1.48	1.40	2.12	1.68	1.39
Discharge	.29	.37	.27	.17	.17	.26	.26	.30	.32
Lay-off	1.79	2.01	2.17	1.08	1.69	.82	1.25	1.01	2.11
Total separation	3.68	3.83	3.55	3.15	3.34	2.48	3.63	2.99	3.82
Accession	8.35	12.80	13.13	3.09	4.11	3.29	3.66	3.86	3.79
Electrical machinery									
Foundries and machine shops									
Quit	1.03	1.11	0.86	1.58	1.67	1.17	2.03	1.48	0.93
Discharge	.19	.17	.23	.34	.43	.29	.42	.37	.25
Lay-off	.46	3.91	.93	1.17	1.00	1.25	2.11	2.52	3.09
Total separation	1.68	5.19	2.02	3.09	3.10	2.71	4.56	4.37	4.27
Accession	6.00	6.11	5.61	5.36	7.07	5.85	3.86	5.00	3.72
Hardware									
Iron and steel									
Quit	2.24	3.67	0.86	1.20	0.97	0.79	1.13	1.09	0.93
Discharge	.29	.26	.31	.10	.09	.08	.10	.16	.04
Lay-off	1.42	1.00	1.33	.86	.53	.44	3.05	1.35	7.65
Total separation	3.95	4.93	2.50	2.16	1.59	1.31	4.28	2.60	8.62
Accession	6.72	4.97	2.24	3.42	5.47	5.43	2.58	2.48	1.94
Petroleum refining									
Rubber tires									
Quit	0.41	0.70	0.69	0.80	0.73	0.68	2.64	2.00	2.04
Discharge	.05	.11	.09	.12	.09	.05	.32	.36	.34
Lay-off	1.84	1.40	1.92	.17	.46	.42	2.66	2.54	3.22
Total separation	2.30	2.21	2.70	1.09	1.28	1.15	5.62	4.90	5.60
Accession	4.37	3.84	4.12	1.51	1.26	3.05	8.31	10.01	8.90
Slaughtering and meat packing									
Quit	0.80	0.86	0.78	—	—	—	—	—	—
Discharge	.16	.27	.23	—	—	—	—	—	—
Lay-off	4.74	5.92	5.57	—	—	—	—	—	—
Total separation	5.70	7.05	6.58	—	—	—	—	—	—
Accession	5.95	5.47	6.61	—	—	—	—	—	—

Labor Laws and Court Decisions

SOCIAL SECURITY ACTS DECLARED CONSTITUTIONAL

THE constitutionality of social-security legislation was upheld by the Supreme Court of the United States on May 24, 1937, in three cases.¹ One case concerned the validity of the Federal unemployment-insurance tax, the second the legality of the old-age-pension tax levy, and the third the constitutionality of the unemployment-insurance law of Alabama. Mr. Justice Cardozo delivered the majority opinion in the Federal social-security cases, while Mr. Justice Stone read the opinion upholding the Alabama act. In all three cases the Court was divided—by a vote of 7 to 2 in the case of the tax payments for old-age pensions, and by a vote of 5 to 4 on the unemployment-insurance tax as well as on the Alabama unemployment-insurance law.

Federal Unemployment-Insurance Tax Case

Under the provisions of title 9 of the Federal Social Security Act, a tax designated as an excise tax is imposed on employers of eight or more persons. The Charles C. Steward Machine Co. of Alabama paid the tax according to the act, and filed a claim for a refund with the Commissioner of Internal Revenue. The company sued to recover the payment, contending that the statute was contrary to the provisions of the Constitution of the United States. Mr. Justice Cardozo in the exordium of the opinion reviewed the purposes of titles 9 and 3 of the act. Title 9 relates to the imposition of the tax on employers of eight or more persons, while title 3 provides for grants to the States for unemployment-compensation administration. Mr. Justice Cardozo then considered the objections raised against the statute by the opponents and remarked that "the assault on the statute proceeds on an extended front." It was argued that the tax was not an excise, and further that it was not uniform throughout the country, as such taxes are required to be, under the Federal Constitution. The exceptions were so many and arbitrary that they violated

¹ *Steward Machine Co. v. Davis*, [57 Sup. Ct. 883]; *Helvering v. Davis*, 57 Sup. Ct. 904; *Carmichael v. Southern Coal & Coke Co., and Same v. Gulf States Paper Corp.*, 57 Sup. Ct. 868.

the fifth amendment, the opponents said, while the purpose of the tax was not revenue but an unlawful invasion of the reserved powers of the State. Finally, it was contended that the States have yielded to it only by coercion, and that they have thus abandoned functions of government which under the Constitution they are not permitted to surrender.

Mr. Justice Cardozo considered the objections in order. As to the levying of the excise tax he stated that the tax was levied "with uniformity throughout the United States as a duty, an impost, or an excise upon the relation of employment." There was no merit to the contention, the Court said, that "the relation of employment is one so essential to the pursuit of happiness that it may not be burdened with a tax." From history and especially from the precedents of early colonial days it was observed that "we are supplied with illustrations of excises common in the colonies," and the Court casually observed that "our colonial forbears knew more about ways of taxing than some of their descendants seem to be willing to concede." Mr. Justice Cardozo pointed out that "employment for lawful gain is a 'natural' or 'inherent' or 'inalienable' right and not a 'privilege' at all." "Natural rights", he said, "are as much subject to taxation as rights of less importance." The power of Congress in the matter of taxation is as comprehensive as that of the States, although the method of apportionment differs, and it is not of much importance whether the tax is classified as an excise. If it is not an "excise", it is an "impost." Both would, therefore, be within the jurisdiction of the taxing power of Congress.

As to the uniformity of the tax, the Court held that "there has been no departure from this requirement." Numerous cases were cited to show that the settled doctrine of uniformity requires that it must be geographical and not intrinsic. Again the tax does not offend the rule of arbitrary classification, even though the act does not apply to employers of less than eight persons, and is not applicable to agricultural labor or domestic service. The classification and exemptions, the Court said, "have support in considerations of policy and practical convenience that cannot be condemned as arbitrary", and continued:

The act of Congress is therefore valid, so far at least as its system of exemptions is concerned, and this though we assume that discrimination, if gross enough, is equivalent to confiscation and subject under the fifth amendment to challenge and annulment.

The excise tax was not void by reason of alleged coercion. The Court described at length the collection and depositing of the funds in the Treasury, and then referred to the widespread unemployment as well as the large expenditures for emergency relief. In the presence of such need the question arises as to whether the expedient adopted "overlept the bounds of power." The Court held that it did not.

The Social Security Act, Mr. Justice Cardozo continued, "is an attempt to find a method by which all these public agencies may work together to a common end."

Every dollar of the new taxes will continue in all likelihood to be used and needed by the Nation as long as States are unwilling, whether through timidity or for other motives, to do what can be done at home. At least the inference is permissible that Congress so believed, though retaining undiminished freedom to spend the money as it pleased. On the other hand, fulfillment of the home duty will be lightened and encouraged by crediting the taxpayer upon his account with the Treasury of the Nation to the extent that his contributions under the laws of the locality have simplified or diminished the problem of relief and the probable demand upon the resources of the fisc.

Who, then, is coerced through the operation of the law? Mr. Justice Cardozo inquired.

Not the taxpayer. He pays in fulfillment of the mandate of the local legislature. Not the State. Even now she does not offer a suggestion that in passing the unemployment law she was affected by duress. * * * For all that appears, she is satisfied with her choice, and would be sorely disappointed if it were now to be annulled. The difficulty with the petitioner's contention is that it confuses motive with coercion. "Every tax is in some measure regulatory. To some extent it interposes an economic impediment to the activity taxed as compared with others not taxed." * * * In like manner every rebate from a tax when conditioned upon conduct is in some measure a temptation. But to hold that motive or temptation is equivalent to coercion is to plunge the law in endless difficulties. The outcome of such a doctrine is the acceptance of a philosophical determinism by which choice becomes impossible. Till now the law has been guided by a robust common sense which assumes the freedom of the will as a working hypothesis in the solution of its problems. The wisdom of the hypothesis has illustration in this case.

There is nothing in the case, the Court said, that suggests "the exertion of a power akin to undue influence", and further stated:

We cannot say that she was acting, not of her unfettered will, but under the strain of a persuasion equivalent to undue influence, when she chose to have relief administered under laws of her own making, by agents of her own selection, instead of under Federal laws, administered by Federal officers, with all the ensuing evils, at least to many minds, of Federal patronage and power. There would be a strange irony, indeed, if her choice were now to be annulled on the basis of an assumed duress in the enactment of a statute which her courts have accepted as a true expression of her will.

The Court was not ruling, the Justice said, that—

a tax is valid, when imposed by act of Congress, if it is laid upon the condition that a State may escape its operation through the adoption of a statute unrelated in subject matter to activities fairly within the scope of National policy and power. No such question is before us. In the tender of this credit Congress does not intrude upon fields foreign to its function. The purpose of its intervention, as we have shown, is to safeguard its own treasury and as an incident to that protection to place the States upon a footing of equal opportunity. Drains upon its own resources are to be checked; obstructions to the freedom of the States are to be leveled. It is one thing to impose a tax dependent upon the conduct of the taxpayers, or of the State in which they live, where the conduct to be stimu-

lated or discouraged is unrelated to the fiscal need subserved by the tax in its normal operation, or to any other end legitimately national.

Finally, the Court held that title 3 of the act was separable from title 9. Under this title no public moneys are appropriated. It only authorizes future appropriations for the purpose of assisting States in the administration of their laws.

The Court remarked that title 3 might be omitted, yet title 9 would remain. This conclusion would be reached even though there was no severability clause, but with this incorporated the conclusion is made even clearer.

DISSENTING OPINIONS

Separate dissenting opinions were delivered by Justices Sutherland (with which Mr. Justice Van Devanter concurred), McReynolds, and Butler. In the opinion by Mr. Justice Sutherland objection was raised to the invasion of powers of the State by the administrative provisions of the act. "If we are to survive as the United States," he concluded—

the balance between the powers of the Nation and those of the States must be maintained. There is grave danger in permitting it to dip in either direction, danger—if there were no other—in the precedent thereby set for further departures from the equipoise. The threat implicit in the present encroachment upon the administrative functions of the States is that greater encroachments, and encroachments upon other functions, will follow.

Mr. Justice McReynolds' dissenting opinion was based on the unauthorized grant of power to the Congress. The act, he stated, "unduly interferes with the orderly government of the State by her own people, and otherwise offends the Federal Constitution." In support of his opinion Justice McReynolds relied almost entirely on a previously decided case of the United States Supreme Court (*Texas v. White*, 7 Wall. 700).

The dissenting opinion by Mr. Justice Butler agreed with the expressions of the other written dissenting opinions, but went further and held that the scheme was repugnant in principle and as applied. No power to pay unemployed persons, or to require the States to enact laws or raise money for that purpose, is granted to the United States by the Constitution, Justice Butler averred. And finally his opinion concluded that—

The terms of the measure make it clear that the tax and credit device was intended to enable Federal officers virtually to control the exertion of powers of the States in a field in which they alone have jurisdiction and from which the United States is by the Constitution excluded.

Old-Age-Pension Tax Case

This case was brought by one George P. Davis, a stockholder of the Edison Electric Illuminating Co. of Boston. He sought to enjoin

the company from paying the old-age-pension levies as provided in titles 2 and 8 of the Federal Social Security Act. Mr. Justice Cardozo in his opinion declared that the scheme of benefits established under the act was not in violation of the tenth amendment to the Constitution of the United States. He said that "Congress may spend money in aid of the 'general welfare'."

The concept of the general welfare is not "static", the majority opinion stated, and "needs that were narrow or parochial a century ago may be interwoven in our day with the well-being of the Nation. What is critical or urgent changes with the times."

The purge of Nation-wide calamity that began in 1929 has taught us many lessons. Not the least is the solidarity of interests that may once have seemed to be divided. Unemployment spreads from State to State, the hinterland now settled that in pioneer days gave an avenue of escape. * * * Spreading from State to State, unemployment is an ill not particular but general, which may be checked, if Congress so determines, by the resources of the Nation. If this can have been doubtful until now, our ruling today in the case of the Steward Machine Co., *supra*, has set the doubt at rest. But the ill is all one or at least not greatly different whether men are thrown out of work because there is no longer work to do or because the disabilities of age make them incapable of doing it. Rescue becomes necessary irrespective of the cause. The hope behind this statute is to save men and women from the rigors of the poorhouse as well as from the haunting fear that such a lot awaits them when journey's end is near.

The problem created by old age, the Court pointed out, "is plainly national in area and dimensions." The concept of the general welfare was specifically referred to and elaborated by the Court, in concluding the majority opinion, in these words:

Moreover, laws of the separate States cannot deal with it effectively. Congress, at least, had a basis for that belief. States and local governments are often lacking in the resources that are necessary to finance an adequate program of security for the aged. This is brought out with a wealth of illustration in recent studies of the problem. * * * Apart from the failure of resources, States and local governments are at times reluctant to increase so heavily the burden of taxation to be borne by their residents for fear of placing themselves in a position of economic disadvantage as compared with neighbors or competitors. We have seen this in our study of the problem of unemployment compensation. * * * A system of old-age pensions has special dangers of its own, if put in force in one State and rejected in another. The existence of such a system is a bait to the needy and dependent elsewhere, encouraging them to migrate and seek a haven of repose. Only a power that is national can serve the interests of all.

Whether wisdom or unwisdom resides in the scheme of benefits set forth in title II, it is not for us to say. The answer to such inquiries must come from Congress, not the courts. Our concern here as often is with power, not with wisdom. Counsel for respondent has recalled to us the virtues of self-reliance and frugality. There is a possibility, he says, that aid from a paternal government may sap those sturdy virtues and breed a race of weaklings. If Massachusetts so believes and shapes her laws in that conviction, must her breed of sons be changed, he asks, because some other philosophy of government finds favor in the halls of Congress? But the answer is not doubtful. One might ask with equal reason whether the system of protective tariffs is to be set aside at will in

one State or another whenever local policy prefers the rule of laissez faire. The issue is a closed one. It was fought out long ago. * * * When money is spent to promote the general welfare, the concept of welfare or the opposite is shaped by Congress, not the States. So the concept be not arbitrary, the locality must yield.

While no written dissenting opinion was rendered in this case, Justices McReynolds and Butler declared that the provisions of the act were repugnant to the tenth amendment to the Constitution of the United States.

Alabama Unemployment-Compensation Decision

The legality of the Alabama unemployment-compensation law was determined by the United States Supreme Court in two cases, brought to the Court by the Southern Coal & Coke Co. and the Gulf States Paper Corporation. Mr. Justice Stone delivered the opinion in this case, in which Mr. Justice Sutherland delivered a dissenting opinion joined in by Justices Van Devanter and Butler. The two companies contended that the Alabama Unemployment-Compensation Act infringed the due-process and equal-protection clauses of the fourteenth amendment, and also that the act was invalid because its enactment was coerced by the action of the Federal Government in adopting the Social Security Act and because it involved an unconstitutional surrender to the National Government of the sovereign power of the State. The unemployment-compensation law of Alabama was enacted in 1935 (Act No. 447). It provides a comprehensive scheme for unemployment benefits to employees of employers having eight or more persons in their employ for 20 or more weeks in the year. The act also imposes on the employers the duty of paying a certain percentage of their total monthly pay rolls into a State unemployment-compensation fund. Mr. Justice Stone in his written opinion frequently referred to pronouncements from the two cases previously decided by the Court on social security. Insofar as the State act exacts contributions from employers of eight or more persons, Mr. Justice Stone said, it was a valid exercise of the State's taxing power. In support of this view the Court relied on a decision of the Supreme Court of Alabama (*Beeland Wholesale Co. v. Kaufman*, 174 So. 516) in which the court of that State held that "the contributions which the statute exacts of employers are excise taxes laid in conformity to the constitution and laws of the State."

The particular name which a State gives to a money exaction is not controlling, the Court said, "when its constitutionality is in question", and continuing, "we see no reason to doubt that the present statute is an exertion of the taxing power of the State." It was advanced that while taxes were commonly levied on property or its use, they may likewise be laid on "the exercise of personal rights and privileges."

It is likewise inherent in the power to tax "that a State be free to select the subjects of taxation and to grant exemptions." Reference was made to the repeated decisions of the Court "that inequalities which result from a singling out of one particular class for taxation or exemption infringe no constitutional limitation." Again the Court said:

Like considerations govern exemptions from the operation of a tax imposed on the members of a class. A legislature is not bound to tax every member of a class or none. It may make distinctions of degree having a rational basis, and when subjected to judicial scrutiny they must be presumed to rest on that basis if there is any conceivable state of facts which would support it.

The Court, speaking through Mr. Justice Stone, held that the tax does not violate the fourteenth amendment of the Constitution by reason of the exemptions. "Administrative convenience and expense", he said, "in the collection or measurement of the tax are alone a sufficient justification for the difference between the treatment of small incomes or small taxpayers and that meted out to others." The Court further said:

We cannot say that the expense and inconvenience of collecting the tax from small employers would not be disproportionate to the revenue obtained. For it cannot be assumed that the legislature could not rightly have concluded that generally the number of employees bears a relationship to the size of the pay roll and therefore to the amount of the tax, and that the large number of small employers and the paucity of their records of employment would entail greater inconvenience in the collection and verification of the tax than in the case of larger employers.

It would hardly be contended that the State, in order to tax pay rolls, is bound to assume the administrative cost and burden of taxing all employers having a single employee. But if for that or any other reason it may exempt some, whether it should draw the line at one, three, or seven, is peculiarly a question for legislative decision. The decision cannot be said to be arbitrary because it falls in the twilight zone between those members of the class which plainly can and those which plainly cannot expediently be taxed.

The Court also held that the act was not arbitrary in exempting certain types of employers. Many reasons for the selections, the Court said, could be advanced and innumerable decisions have been rendered upholding the right. Administrative considerations may explain several exemptions, it was shown.

Relatively great expense and inconvenience of collection may justify the exemption from taxation of domestic employers, farmers, and family businesses, not likely to maintain adequate employment records, which are an important aid in the collection and verification of the tax. The State may reasonably waive the formality of taxing itself or its political subdivisions. Fear of constitutional restrictions, and a wholesome respect for the proper policy of another sovereign, would explain exemption of the United States, and of the interstate railways, * * *. In no case do appellees sustain the burden which rests upon them of showing that there are no differences, between the exempt employers and the industrial employers who are taxed, sufficient to justify differences in taxation.

It was also held by the Court that employers could not question the constitutionality of the tax levied on the employees. They cannot object to a tax, the Court pointed out—

which they are not asked to pay, at least if it is separable, as we think it is, from the tax they must pay. The statute contains the usual separability clause. * * * The taxation of employees is not prerequisite to enjoyment of the benefits of the Social Security Act. The collection and expenditure of the tax on employers do not depend upon taxing the employees, and we find nothing in the language of the statute or its application to suggest that the tax on employees is so essential to the operation of the statute as to restrict the effect of the separability clause. Distinct taxes imposed by a single statute are not to be deemed inseparable unless that conclusion is unavoidable.

The majority opinion as read by Mr. Justice Stone referred to the fact that the Court had consistently recognized "that the public purposes of a State, for which it may raise funds by taxation, embrace expenditures for its general welfare." Relief for unemployment has been recognized as a public purpose, the Court especially stressed, and drew attention to the picture of conditions that the Nation had experienced during the past 6 years.

The evils of the attendant social and economic wastage permeate the entire social structure. Apart from poverty, or a less extreme impairment of the savings which afford the chief protection to the working class against old age and the hazards of illness, a matter of inestimable consequence to society as a whole, and apart from the loss of purchasing power, the legislature could have concluded that unemployment brings in its wake increase in vagrancy and crimes against property, reduction in the number of marriages, deterioration of family life, decline in the birth rate, increase in illegitimate births, impairment of the health of the unemployed and their families, and malnutrition of their children.

Again it was held that the act did not violate the fourteenth amendment on the ground that the law exacts a tax from an employer who may either not have contributed to unemployment nor benefited by the expenditure.

Even if a legislature should undertake, what the Constitution does not require, to place the burden of a tax for unemployment benefits upon those who cause or contribute to unemployment, it might conclude that the burden cannot justly be apportioned among employers according to their unemployment experience. Unemployment in the plant of one employer may be due to competition with another, within or without the State, whose factory is running to capacity; or to tariffs, inventions, changes in fashions or in market or business conditions, for which no employer is responsible, but which may stimulate the business of one and impair or even destroy that of another. Many believe that the responsibility for the business cycle, the chief cause of unemployment, cannot be apportioned to individual employers in accordance with their employment experience; that a business may be least responsible for the depression from which it suffers the most.

And finally, it was the opinion of the Court that the State act was not unconstitutional on the theory that the passage of the act was coerced by the Federal Government through the social-security law.

As the Social Security Act is not coercive in its operation, the Unemployment Compensation Act cannot be set aside as an unconstitutional product of coercion.

The United States and the State of Alabama are not alien governments. They coexist within the same territory. Unemployment within it is their common concern. Together the two statutes now before us embody a cooperative legislative effort by State and National Governments, for carrying out a public purpose common to both, which neither could fully achieve without the cooperation of the other. The Constitution does not prohibit such cooperation.

DISSENTING OPINION

Mr. Justice Sutherland in his dissenting opinion did not doubt the objective sought in the Alabama Unemployment Compensation Act, but he believed that the objective was one which must be attained by legislation which does not violate specific provisions of the Federal Constitution. Special reference was made by the dissenting Justice to the Wisconsin unemployment-compensation law. He contended that the act in this State, in which individual employer accounts are maintained, was "so fair, reasonable and just as to make plain its constitutional validity", and that the Alabama statute was "so arbitrary as to result in a denial both of due process and equal protection of the laws." This the Justice based on a previously equally-divided court in the New York unemployment-insurance case (*Chamberlain, Inc. v. Andrews*, 299 U. S. 515).



PICKETING PROVISIONS OF WISCONSIN LABOR CODE UPHELD

ON MAY 24, 1937, the United States Supreme Court held that a labor organization had the right, under the Wisconsin Labor Code, to engage in peaceful picketing, even to the extent of calling to the attention of the public the activities of a nonunion employer. (*Senn v. Tile Layers Protective Union, Local No. 5*, 57 Sup. Ct. 857.) One Paul Senn brought a suit in the Circuit Court of Milwaukee County against the Tile Layers Protective Union, Local No. 5, and the Tile Layers Helpers Union, Local No. 47, and their business agent, for an injunction to restrain picketing and especially the publishing of statements that he was unfair to organized labor and to the tile-layers' unions. Senn conducted a small tile business, employing one or two journeyman tile layers and several helpers, and performed much of the work himself. At the time of the court action neither Senn nor his employees were members of either union and had no contractual relations with them. In fact, Senn could not become a member of the tile layers' union, because the constitution and rules of the union provided that a journeyman tile setter must have acquired his experi-

ence through at least 3 years of apprenticeship. On account of the condition of the industry and its peculiar composition, the unions considered it necessary to require all employers agreeing to conduct a union shop to assent that no member of a tile-contracting business "shall work with the tools or act as helper." Senn was induced to become a union contractor. He expressed a willingness to enter into the agreement, provided the stipulation relative to working employers was eliminated. The union countered that this was impossible, since the inclusion of the provision was necessary in maintaining wage standards, and further that it would be an act of discrimination against other contractors who had signed the agreement. Because of the refusal by Senn to sign the agreement, the union picketed his place of business, and carried several banners depicting him as unfair to labor.

The lower court denied an injunction to Senn. On the findings made, the court declared that the controversy was a labor dispute, that the picketing was lawful, and further that it was not unlawful for the union to advise, etc., without fraud, anyone of the existence of the labor dispute. Later appeals to the supreme court of the State affirmed the judgment of the trial court. The United States Supreme Court then consented to hear the case. Mr. Justice Brandeis in rendering the opinion declared that the judgment of the highest court of the State construing and applying the act and the State constitution must be considered as conclusive. The main question for determination by the United States Supreme Court was whether the act, as applied to the facts, constituted a denial of liberty to Senn or deprived him of his property or denied him equal protection of the laws in violation of the fourteenth amendment. Senn did not claim that the Constitution of the United States prohibited a State from authorizing publicity and peaceful picketing, but he rested his claim of invalidity on the fact that he refused to unionize his shop solely because the union insisted upon the retention of the article in the agreement relating to the performance of work by employers. Senn contended that the right to work in his business with his own hands was a right guaranteed by the Federal Constitution, and that a State may not permit actions that tend "to induce him to refrain from exercising it."

The unions conceded that as long as Senn conducted a nonunion shop he had the right to work with his hands and tools. But on the other hand, the union contended that "since Senn's exercise of the right to do so is harmful to the interests of their members, they may seek by legal means to induce him to agree to unionize his shop and to refrain from exercising his right to work with his own hands."

The highest court of the State, Mr. Justice Brandeis said, decided that the means employed and the end sought by the unions were legal

under the law. The question for determination was whether either of these is forbidden by the Constitution of the United States. Mr. Justice Brandeis declared:

Clearly the means which the statute authorizes—picketing and publicity—are not prohibited by the fourteenth amendment. Members of a union might, without special statutory authorization by a State, make known the facts of a labor dispute, for freedom of speech is guaranteed by the Federal Constitution. The State may, in the exercise of its police power, regulate the methods and means of publicity as well as the use of public streets. If the end sought by the unions is not forbidden by the Federal Constitution the State may authorize working men to seek to attain it by combining as pickets, just as it permits capitalists and employers to combine in other ways to attain their desired economic ends.

Reference was made by Mr. Justice Brandeis to the declaration of the Wisconsin Legislature as to peaceful picketing and patrolling. The statute provides—

that the picketing must be peaceful; and that term as used implies not only absence of violence, but absence of any unlawful act. It precludes the intimidation of customers. It precludes any form of physical obstruction or interference with the plaintiff's business. It authorizes giving publicity to the existence of the dispute "whether by advertising, speaking, patrolling any public street or place where any person or persons may lawfully be"; but precludes misrepresentation of the facts of the controversy. And it declares that "nothing herein shall be construed to legalize a secondary boycott." * * * Inherently, the means authorized are clearly unobjectionable. In declaring such picketing permissible Wisconsin has put this means of publicity on a par with advertisements in the press.

It was decided by the State courts that the unions had observed the limitations contained in the statute. The majority opinion observed that the picketing was peaceful and that—

The publicity did not involve a misrepresentation of fact; nor was any claim made below that relevant facts were suppressed. Senn did not contend that it was untruthful to characterize him as "unfair", if the requirement that he refrain from working with his own hands was a lawful one. He did not ask that the banners be required to carry a fuller statement of the facts. * * * Moreover, it was confessedly open to Senn to disclose the facts in such manner and in such detail as he deemed desirable, and on the strength of the facts to seek the patronage of the public.

The Court remarked that the famous case of *Truax v. Corrigan* (257 U. S. 312) was not applicable to the facts in this case. There, the cause of action was a libelous attack and abusive epithets against the employer and his friends.

The Court also concluded that the end sought by the unions was not unconstitutional. In arriving at this conclusion it was shown that the finding of the State courts was amply supported by the evidence, and—

There is no basis for a suggestion that the unions' request that Senn refrain from working with his own hands, or their employment of picketing and publicity, was malicious; or that there was a desire to injure Senn. The sole purpose of the picketing was to acquaint the public with the facts and, by gaining its support, to induce Senn to unionize his shop. There was no effort to induce Senn to do an un-

lawful thing. There was no violence, no force was applied, no molestation or interference, no coercion. There was only the persuasion incident to publicity.

The Court thought that the unions had a right to act as they did to protect their own members from the harmful effect of Senn's action. Whether it was wise for the State to permit the unions to endeavor to induce an employer, when his shop was unionized, to refrain from working himself was a question of public policy. It was no concern of the highest Court of the Nation. The fourteenth amendment does not forbid it.

The Supreme Court, in the opinion by Mr. Justice Brandeis, held also that there is no constitutional provision that prohibits unions from competing with nonunion concerns for customers by means of picketing. They may do so as freely, the Court said, "as one merchant competes with another by means of advertisements in the press, by circulars, or by his window display." The Court continued:

Each member of the unions, as well as Senn, has the right to strive to earn his living. Senn seeks to do so through exercise of his individual skill and planning. The union members seek to do so through combination. Earning a living is dependent upon securing work; and securing work is dependent upon public favor. To win the patronage of the public each may strive by legal means. Exercising its police power, Wisconsin has declared that in a labor dispute peaceful picketing and truthful publicity are means legal for unions. It is true that disclosure of the facts of the labor dispute may be annoying to Senn even if the method and means employed in giving the publicity are inherently unobjectionable. But such annoyance, like that often suffered from publicity in other connections, is not an invasion of the liberty guaranteed by the Constitution.

DISSENTING OPINION

Mr. Justice Butler delivered a dissenting opinion joined in by Justices Van Devanter, McReynolds, and Sutherland. The dissenting opinion reviewed in detail the facts leading up to the cause of action and the evidence adduced for the needed injunction. As to the invoking of the protection of the fourteenth amendment, Mr. Justice Butler said:

Our decisions have made it everywhere known that these provisions forbid State action which would take from the individual the right to engage in common occupations of life, and that they assure equality of opportunity to all under like circumstances. Lest the importance or wisdom of these great declarations be forgotten or neglected, there should be frequent recurrence to decisions of this Court that expound and apply them.

Former decisions of the Supreme Court were cited in the dissenting opinion to substantiate the view that the statute violated a fundamental part of the Constitution.

Mr. Justice Butler declared that the object that the unions sought to attain was an unlawful one, and again that the picketing was contrary to law since the signs used constituted a misrepresentation of the facts. There was no foundation "for any such accusation", Mr. Justice Butler continued.

There was no warrant for characterizing him as "unfair" or opposed to any legitimate purpose of the tile layers' union or as unjust to union men. There is no escape from the conclusion that the unions intended by the picketing they carried on to misrepresent plaintiff in respect of his relation to, or dealing with, the tile layers' union and by that means to deprive him of his occupation. The burden may not justly be held to be on him, by counter-picketing or otherwise, to refute or explain the baseless charge.

The dissenting justices were therefore of the opinion that the judgment of the State court violated a principle of fundamental law, and further stated:

No man may be compelled to hold his life or the means of living at the mere will of others. * * * The State statute, construed to make lawful the employment of the means here shown to deprive plaintiff of his right to work or to make lawful the picketing carried on in this case, is repugnant to the due-process and equal-protection clauses of the fourteenth amendment.



LABOR LEGISLATION ENACTED BY THE PARLIAMENT OF CANADA, 1937

THREE laws of labor interest were added to the statutes of the Dominion of Canada by the Parliament which began in January and ended in April of 1937. The new acts deal with unemployment relief, housing, and pensions for the blind.¹

Unemployment Relief

On April 10, royal assent was given to the Unemployment and Agricultural Assistance Act, which is quite similar to the legislation passed in the preceding year under a like title. The 1937 statute provides that the Governor General in Council may, out of Parliamentary appropriations, "authorize the execution of such works and undertakings as he may determine to be to the general interest of Canada and requisite for the purposes of the act, giving employment as far as practicable to relief recipients registered with the Employment Service of Canada in the Province in which such work or undertaking is to be performed."

The Governor General in Council is also empowered to enter into agreements with the Provinces to alleviate unemployment and agricultural distress. Financial aid is available to any Province through loan or guaranty, not to exceed the total amount payable by the Province as its quota of the expenditures through any agreement made under the act, together with the sum for which the Province may be responsible on account of commitments under the act of the

¹ Canada. Department of Labor. *Labor Gazette*, Ottawa, May 1937, pp. 502-503.

preceding year and continued through agreement made under the statute of 1937. The new legislation provides that no financial aid shall be extended to any Province unless the Province submits to the Dominion Government certified financial statements at the required time and in the specified form, with such other data as that Government may consider necessary.

The Governor in Council may also make agreements with corporations, partnerships, or individuals engaged in industry, respecting the expansion of industrial employment, may renew or consolidate advances, loans, or guaranties made or renewed under authority of the act, and may make regulations for carrying out its provisions. The act will expire on March 31, 1938, except as regards the clause authorizing the renewal or consolidation of loans, advances, or guaranties, but obligations or liabilities incurred or created under authority of the act may be discharged.

Home Improvement Loans

The purpose of the Home Improvement Loans Guarantee Act, 1937, assented to March 31, is to make effective the home-improvement plan, which the Prime Minister announced on September 8, 1936. This plan was recommended by the National Employment Commission with a view to expanding employment and to encouraging construction. Under the act, the Governor in Council may guarantee lending institutions which have received his approval for the purpose of making loans for home improvements, against losses which they may incur as a result of these loans. The Government's liability is restricted to 15 percent of the total amount of the loans of any such institution, and may not exceed in all the sum of \$7,500,000.

The conditions with which a lending institution must comply in order to obtain the Government guaranty are as follows: "That no loan on a single property shall exceed \$2,000 except in the case of a multiple family property when the maximum loan is \$1,000 for each family unit on the property as improved plus the sum of \$1,000; that the loan shall be made only to the owner of the property; that the term of the loan may not exceed 3 years, if for \$1,000 or less, and 5 years if over that amount, and shall be repaid in convenient periodic installments; that the maximum charge shall not exceed 3½ percent for a 1-year loan repayable in equal monthly installments and proportionate rates for other periods; that as long as the borrower is not in default, no service, insurance, or other charges shall be made and no security by way of endorsement or otherwise shall be taken."

Any person making a false statement in applying for a loan under the act or improperly using such a loan is subject to a fine ranging from \$25 to \$500.

Pensions for the Blind

An amendment to the Old Age Pension Act, which received royal assent on March 31, provides for payment of pensions to blind persons who have reached the age of 40 years and have met the other require-

ments of the act. These "persons must be and continue to be, so blind as to be unable to perform any work for which eyesight is essential, and must not be in receipt of a pension or allowance in respect of blindness under the Pension Act or the War Veterans' Allowance Act."

To benefit under this 1937 amendment, a person's income must be less than \$440 per annum in the case of a single person or a childless widow, or widower, or \$640 per annum in the case of a married person, widow or widower with children. "Child" means a son or stepson who has not completed his sixteenth year or a daughter or stepdaughter under 17 years of age, or a son, stepson, daughter, or stepdaughter, over these respective ages but under 21 years of age, who is not able to earn a livelihood because of physical or mental disability. Furthermore, in order to receive a pension "the blind applicant must be a British subject, or if a widow who is not a British subject, must have been such before her marriage; must have resided in Canada for 20 years and in the Province in which application is made for 5 years immediately preceding the date of application; must not be an Indian as defined by the Indian Act, and must not have made a voluntary assignment or transfer of property for the purpose of qualifying for a pension."

The maximum pension is \$240 a year and is reduced to \$120 if a blind person marries another blind person after the act has become effective. The pension may be reduced by the amount the beneficiary's income exceeds \$200 per annum in the case of a single person, a widow or widower without children, or a person married to one already in receipt of a pension for the blind; and by the amount of such income in excess of \$400 per annum in the case of a married person, widow, or widower with one child or more.



REGULATION OF WOMAN AND CHILD LABOR IN SYRIA¹

THE labor of children under 13 years of age in the Syrian Republic is prohibited, and that of children between the ages of 13 and 16 and of women is regulated, by Legislative Decree No. 32 issued by the President of the Syrian Republic.

Employment of children below the minimum age is forbidden in factories, workshops, mines, excavations, and quarries, either public or private. Establishments "having a professional, educational, or charitable character" are exempted to the extent that manual labor of children under 13 is permitted up to a maximum of 4 hours a day.

¹ From report of Easton T. Kelsey, American vice consul, Beirut, dated Mar. 22, 1937.

The prohibition does not apply to agriculture, commercial establishments, or workshops where only members of the family are employed.

Children between 13 and 16 years of age "cannot be forced to work more than 7 hours a day", and may not be employed after 7 p. m. nor before 6 a. m. No more than 4 hours' consecutive work is permitted and intervals during the working day for rest or meals must total a minimum of 1 hour. A weekly rest period of at least 24 consecutive hours must be observed.

Various industries and occupations are listed in which the employment of children between the ages of 13 and 16 is prohibited. These include heavy industries, underground work, and industries usually regarded as hazardous either to health or safety. Apprenticeship in the industries listed is permitted if authorized by the director of hygiene and public health.

Certain other hazardous industries and occupations are listed in the decree for which a certificate of physical fitness is required before children under 16 years of age may be employed. The certificate is to be granted free of charge by the sanitary authorities and may be canceled if the child is shown not to be physically fit for work in the industries specified. These include printing, various stages of textile manufacture, transportation, cargo handling, and manufactures such as glass, fertilizers, paints, and varnishes. The list of prohibited industries may be modified by official decree.

Women may not be employed at manual labor for more than 8 hours per day, nor between 9 p. m. and 5 a. m. The arrangement of daily and weekly rest periods required for children applies also to women. The industries closed to children are closed to women as well, with the exception of tanneries, fertilizer warehouses, and slaughterhouses. Nonmanual employment of women is specifically exempted.

Employment before and after childbirth is regulated, and the employer may not discharge a woman because of absence due to childbirth. On the other hand, the woman may not claim wages for the period of her absence, and may be subject to discharge if she has worked for wages elsewhere during that period.

Enforcement of these regulations governing the employment of women and children is the duty of the director of hygiene and public health. He is directed to appoint male and female inspectors who are to be given access at any time to the premises of employers subject to the decree. Penalties for violations of the child-labor regulations may be assessed against the employer or any of his agents and against the parents or guardians of children illegally employed.

Warning is to follow the first infraction of this legislative decree. If within a year thereafter a second violation occurs in the same establishment, the employer becomes liable to a fine of from 5 to 50 Syrian pounds.²

² Syrian pound at par = 78.38 cents.

Industrial Accidents

ACCIDENT EXPERIENCE OF STEAM RAILROADS IN 1935¹

TRAIN accidents in 1935 were responsible for 239 deaths and 1,056 nonfatal injuries, including 77 deaths and 363 nonfatal injuries to employees on duty. Train-service accidents accounted for 4,650 deaths and 15,535 nonfatal injuries, of which 357 deaths and 6,293 nonfatal injuries were sustained by employees on duty. Nontrain (including industrial) accidents resulted in 218 deaths and 11,489 nonfatal injuries, of which 121 deaths and 9,692 nonfatal injuries occurred to employees on duty. Nonfatal injuries to employees include only those causing disability of more than 3 days.

The total number of deaths in all types of accidents was 5,107 in 1935, as against 4,879 in 1934, an increase of 4.67 percent. The total number of nonfatal injuries in all types of accidents was 28,080 in 1935, as against 28,631 in 1934, a decrease of 1.92 percent. Locomotive-miles rose from 1,099,365,000 in 1934 to 1,120,531,000 in 1935, an increase of 1.93 percent.

In a recent report of the Bureau of Statistics of the Interstate Commerce Commission, from which the above data are taken, it is calculated that during 1935, 4.36 persons were killed and 14.81 were injured per 1,000,000 locomotive-miles in train and train-service accidents on steam railways in the United States, as compared with 4.23 persons killed and 14.96 injured during 1934.

It will be noted from these data that nonfatal injuries decreased in spite of the fact that locomotive-miles increased, but that the percentage of increase of fatalities was greater than the percentage of increase of locomotive mileage.

The number of employees killed while on duty, in either train, train-service, or nontrain accidents, increased from 526 in 1934 to 555 in 1935, or 5.51 percent, while the number injured dropped from 16,990 in 1934 to 16,348 in 1935, a decrease of 3.78 percent. Man-hours for all

¹ U. S. Interstate Commerce Commission. Bureau of Statistics. Accident Bulletin No. 104: Summary and Analysis of Accidents on Steam Railways in the United States Subject to the Interstate Commerce Act, for the calendar year 1935. Washington, 1936.

employees are not available, but man-hours for class I roads decreased from 2,300,815,000 in 1934 to 2,299,807,000 in 1935, a decrease of 0.04 percent.

The total number of persons and the number of employees on duty who were killed and injured in 1934 and 1935, by type and cause of accident, are shown in table 1. The data for 1934 were derived from Accident Bulletin No. 103 published by the Interstate Commerce Commission in 1935 and reviewed in the February 1936 issue of the *MONTHLY LABOR REVIEW*.

TABLE 1.—Persons Killed and Injured in Steam-Railway Accidents in the United States, 1934 and 1935, by Type and Cause of Accident

Type and cause of accident	Total persons				Employees on duty			
	Killed		Injured		Killed		Injured	
	1934	1935	1934	1935	1934	1935	1934	1935
Train accidents:								
Collisions.....	33	22	263	346	30	16	123	139
Derailments.....	142	110	601	564	58	38	171	171
Locomotive-boiler accidents.....	5	5	18	7	5	5	18	7
Other locomotive accidents.....	2	—	11	5	2	—	10	5
Miscellaneous.....	74	102	107	134	1	18	30	41
Total, train accidents.....	256	239	1,000	1,056	96	77	352	363
Train-service accidents:								
Coupling or uncoupling cars or locomotives.....	17	16	254	264	17	16	254	264
Coupling or uncoupling air hose.....	7	12	132	107	7	12	132	107
Operating locomotives.....	6	11	909	845	6	11	909	845
Operating hand brakes.....	14	10	514	536	14	10	514	536
Operating switches.....	1	2	192	186	1	2	192	186
Contact with fixed structures.....	54	48	201	184	15	16	126	131
Getting on or off cars or locomotives.....	417	346	3,358	3,259	18	22	1,319	1,380
Accidents at highway grade crossings.....	1,442	1,554	4,182	4,443	8	13	55	51
Struck or run over, not at public crossings.....	1,725	1,794	994	958	117	128	171	148
Miscellaneous.....	713	857	4,710	4,753	109	127	2,668	2,645
Total, train-service accidents.....	4,396	4,650	15,446	15,535	312	357	6,340	6,293
Total, train and train-service accidents.....	4,652	4,889	16,446	16,591	408	434	6,692	6,656
Total nontrain (including industrial accidents).....	227	218	12,185	11,489	118	121	10,298	9,602
Grand total, all accidents.....	4,879	5,107	28,631	28,080	526	555	16,990	16,348
Percent of increase or decrease in total accidents, 1934 to 1935.....	+4.67	—	-1.92	—	+5.51	—	—	-3.78
Accident rate (train and train-service) per 1,000,000 locomotive-miles.....	4.23	4.36	14.96	14.81	0.37	.39	6.09	5.94

Table 2 shows the actual or probable number of days' disability from temporary injuries and the severity of permanent injuries, in the case of employees on duty, for the year 1935, time losses in the case of permanent injuries being assessed according to the standard method adopted by the International Association of Industrial Accident Boards and Commissions.²

² U. S. Bureau of Labor Statistics Bull. No. 276: Standardization of Industrial Accident Statistics. Washington, 1920.

TABLE 2.—*Train and Train-Service Accidents to Railroad Employees on Duty, and Length of Disability, 1935, by Nature of Injury*

Nature of injury	Number	Actual or probable days' disability	
		Number	Average per injury
Temporary disability:			
Bruise	1,573	30,520	19
Sprain or strain	1,699	33,360	20
Cut or laceration	783	15,775	20
Electrical shock or burn	4	82	21
Other burn	177	4,490	25
Dislocation	100	3,539	35
Cinders or other foreign substance in eye	188	2,527	13
Fracture	1,681	103,932	62
Amputation of toe	5	545	109
Not otherwise classified	141	5,316	38
Total	6,351	200,086	32
Permanent disability, nonfatal:			
Loss of eye	5	8,100	1,620
Fracture	1	6,000	6,000
Amputations:			
Arm or hand	37	137,200	3,708
Finger	83	32,250	389
Leg or foot	73	271,500	3,719
Toe	22	6,700	305
Total	1,221	461,750	2,089
Permanent disability, subsequently fatal:			
Other burn	9	-----	-----
Fracture	34	-----	-----
Amputation	14	-----	-----
Not otherwise classified	27	-----	-----
Total	84	-----	-----

¹ Includes 12 injuries classifiable as permanent total disability.



INDUSTRIAL ACCIDENTS AND COMPENSATION UNDER THE WORKS PROGRAM, 1935-36

FROM July 1, 1935, to December 31, 1936, there were over 74,000 lost-time injuries to employees of The Works Program. This was a frequency rate of 18.5 per million man-hours of exposure as compared with 41.0 for C. W. A. workers and 40.0 for F. E. R. A. workers prior thereto. The following data as to the accident record and compensation for accidental injuries and deaths of The Works Program employees in 1935-36 are taken from a recent report of the Works Progress Administration.¹

Various factors tend to make accidents in relief work more likely to occur than in work under normal conditions. Relief workers are often under par in physical health; changed mental attitudes due to

¹ U. S. Works Progress Administration. Report on Progress of The Works Program, March 1937. Washington, 1937. (Mimeographed.)

the depression may make them more susceptible to accident; and they may have had little training in safety. W. P. A. safety work was therefore inaugurated in each State, including safety inspections, installation of safety devices and appliances, training in first-aid work, and educational work.

The favorable results of this safety program are shown in the accident record on W. P. A. work. Lost-time injuries from July 1, 1935, to December 31, 1936, numbered 74,116, or a frequency rate of 18.5 per million man-hours of exposure. There were 626 deaths from accident, or 1 for each 6,400,000 man-hours of exposure.

This may be compared with the accident experience under the C. W. A. and the F. E. R. A. prior to the initiation of the W. P. A. Workers in the C. W. A. sustained 48,000 lost-time injuries, a frequency rate of 41 per million man-hours of exposure. There were 375 deaths from accident, or 1 for each 3,180,000 man-hours of exposure. F. E. R. A. workers suffered 43,320 lost-time injuries, or 40 per million man-hours, and 266 accidental deaths, or 1 for each 4,100,000 man-hours.

The part played by various causes in these W. P. A. injuries is shown in the following percentage distribution of the 74,116 accidents.

	Percent
Handling objects.....	26.9
Hand tools.....	19.1
Falls of persons.....	16.0
Falling objects.....	9.8
Stepping or striking against objects.....	7.4
Vehicles.....	7.0
Poisons and corrosive substances.....	3.0
Machinery.....	3.0
Electricity, fire, and hot substances.....	1.0
Animals.....	.6
Explosives.....	.4
All others.....	5.8
 Total.....	 100.0

Compensation for injury or death of employees of The Works Program was provided for in the Emergency Relief Appropriation Acts of 1935 and 1936. The maximum compensation under this legislation is \$25 a month for injury and \$3,500 in case of death or permanent disability.

By the end of 1936 there had been reported for compensation 310,356 cases of injuries, including 59,947 lost-time cases and 250,409 cases involving only medical or hospital expenses. In the same period there had been expended for compensation a total of \$4,569,720, of which \$3,300,000 was for medical, hospital, and incidental expenses, and nearly \$740,000 for cases of disability of over 30 days, permanent injury, and death. Compensation for approximately 400 deaths had been allowed and about 350 other cases of death were under consideration.

Wages and Hours of Labor

SALARIES OF SOCIAL WORKERS MARCH 1936

GREAT variations were reported in the salaries of social workers in March 1936 in 243 private case-work organizations. The differences were due in part to differences in size of cities, and, in the case of administrative positions, to the number of persons supervised. The salary range for executives was from \$1,140 to over \$10,000. The salaries of case-work supervisors ran from \$1,320 to \$5,000 and those of district secretaries from \$1,500 to \$4,300, as shown in the accompanying table. The figures are taken from a report of the sixth of a series of surveys made by the Department of Statistics of the Russell Sage Foundation.¹

*Annual Salaries Paid by 243 Private Family Case-Work Organizations,
by Position and Size of City, March 1936*

Vocational classification and size of city	Number of organizations	Number of workers	Annual salary, March 1936		
			Lowest	Median	Highest
Executives:					
Cities with population of—					
Under 25,000.....	36	36	\$1,200	\$2,050	\$5,000
25,000 to 50,000.....	40	40	1,200	2,100	3,300
50,000 to 75,000.....	22	22	1,500	2,375	3,720
75,000 to 100,000.....	14	14	1,500	2,450	3,600
100,000 to 150,000.....	34	34	1,140	2,545	4,800
150,000 to 300,000.....	28	28	1,500	2,985	6,000
300,000 to 500,000.....	16	16	2,160	3,724	7,120
500,000 or over.....	34	34	1,805	4,900	* 10,000
Directors of family case-work departments:					
Cities with population of 500,000 or over.....	8	8	3,300	4,150	6,000
Case-work supervisors:					
Cities with population of—					
75,000 to 100,000.....	4	4	1,800	2,040	2,400
100,000 to 150,000.....	7	7	1,320	2,700	3,000
150,000 to 300,000.....	15	16	1,800	2,646	3,120
300,000 to 500,000.....	10	10	2,100	2,985	3,240
500,000 or over.....	26	26	1,920	3,100	5,000
Assistant case-work supervisors:					
Cities with population of 500,000 or over.....	6	6	1,740	2,490	3,300
District secretaries:					
Cities with population of—					
100,000 to 150,000.....	2	4	1,920	2,000	2,400
150,000 to 300,000.....	4	11	1,680	1,920	2,160
300,000 to 500,000.....	7	28	1,500	2,160	2,700
500,000 or over.....	24	149	1,500	2,400	4,300
Assistant district secretaries:					
Cities with population of—					
300,000 to 500,000.....	2	4	1,380	1,690	2,000
500,000 or over.....	8	46	1,400	1,996	2,700

* Over.

¹ The Family, official organ of Family Welfare Association of America, 130 E. 22d Street, New York City, December 1936, pp. 251-256.

*Annual Salaries Paid by 243 Private Family Case-Work Organizations,
by Position and Size of City, March 1936—Continued*

Vocational classification and size of city	Number of organizations	Number of workers	Annual salary, March 1936		
			Lowest	Median	Highest
Case workers:					
Cities with population of—					
Under 25,000.....	19	45	\$840	\$1,500	\$3,000
25,000 to 50,000.....	33	59	600	1,320	2,070
50,000 to 75,000.....	21	57	720	1,320	2,400
75,000 to 100,000.....	14	73	720	1,200	2,400
100,000 to 150,000.....	32	94	720	1,380	2,200
150,000 to 300,000.....	31	163	720	1,440	2,316
300,000 to 500,000.....	20	172	1,020	1,500	2,430
500,000 or over.....	35	608	960	1,635	2,850
Student case workers:					
Cities with population of—					
150,000 to 300,000.....	4	5	510	780	960
300,000 to 500,000.....	1	5	300	600	660
500,000 or over.....	12	100	600	1,020	1,740
Other case workers in training:					
Cities with population of—					
Under 25,000.....	5	8	650	980	1,296
25,000 to 50,000.....	6	7	540	960	1,200
50,000 to 75,000.....	5	10	720	870	960
100,000 to 150,000.....	6	20	720	1,230	1,500
150,000 to 300,000.....	6	9	600	1,080	1,300
500,000 or over.....	8	22	1,080	1,320	1,800
Home economists:					
Cities with population of 500,000 or over.....	10	14	1,200	1,830	3,000
Employment or vocational workers:					
Cities with population of 500,000 or over.....	11	16	1,200	2,100	3,000

INCOME OF MICHIGAN WORKERS, 1934

OF THE 1,398,678¹ workers in Michigan who were employed on January 14, 1935, according to a census taken on that date,² 4,204, or 0.3 percent, had received no income in the calendar year 1934. Of the 314,415 workers who were unemployed at the time of the enumeration, 11,068 or 35.3 percent had received no income in 1934.

The median income³ in 1934 of workers who had jobs on January 14, 1935, was \$840, the male workers averaging \$912 and the female workers \$583.

Age and Income

Employed workers reported in the 35 to 44 years age group received the highest income—\$1,023—the figure for males being \$1,084 and for females, \$710, as shown in table 1. According to the same tabulation the median income for the age group 15 to 24 years was \$480, and for the workers 65 years of age and over, \$576.

¹ Estimated.

² Michigan. State Emergency Welfare Relief Commission. Total Income During 1934 of Gainful Workers. Lansing, 1937. (Michigan Census of

Population and Unemployment, first series, No. 6.)

³ Any reference to income is a computed median unless otherwise specified.

TABLE 1.—*Median¹ Income During 1934 of Employed Workers in Michigan, by Age Groups*

Age groups ²	Employed workers			Age groups ²	Employed workers		
	Both sexes	Male	Female		Both sexes	Male	Female
	\$840	\$912	\$583	35 to 44 years	1,023	1,084	710
Total				45 to 54 years	930	979	632
15 to 24 years	480	528	432	55 to 64 years	789	836	485
25 to 34 years	916	969	746	65 years and over	576	624	405

¹ Unknown-income group excluded.² Unknown-occupation group excluded.

Occupation and Income

The occupational group receiving the highest median income, \$1,326, in 1934 was composed of professional workers, while the group of unskilled workers had the lowest income, \$461. The income of skilled workers was \$1,096—almost 138 percent above that of the unskilled. The median incomes during 1934 of employed workers in the various kinds of occupations in Michigan were as follows:

Present occupation	Median income	Present occupation	Median income
Total ¹	\$840	Clerical	\$1,004
Professional	1,326	Skilled	1,096
Proprietors ²	835	Semiskilled	764
		Unskilled	461

¹ Unknown-occupation group excluded.² Includes managers and officials.

Table 2 shows the distribution of workers employed at the time of the census, by age group and social economic group, according to median income received in 1934. Only 117,917 persons, or 8.4 percent of the total employed workers, 1,398,678, received \$2,000 or over, while 439,811, or 31.4 percent, were in the \$500 to \$999 group, and 298,889 or 21.4 percent in the \$200 to \$499 group. Of the 93,940 professional workers, 26 percent received \$2,000 or over, but only 10.7 percent of the 247,090 clerical workers and 8.4 percent of the 213,324 skilled workers, were in this highest income group.

TABLE 2.—*Income Received During 1934 by Employed Workers, by Age and Occupational Groups*

Age group	Total workers	Workers with no income	Workers with total income of—						
			\$1-\$199	\$200-\$499	\$500-\$999	\$1,000-\$1,499	\$1,500-\$1,999	\$2,000 and over	Unknown
All occupations ¹	1,398,678	4,204	95,008	298,889	439,811	315,855	122,331	117,917	4,663
15 to 24 years	226,606	1,802	40,528	75,378	76,769	26,026	4,038	982	993
25 to 34 years	372,390	1,029	15,277	63,551	127,439	103,386	36,938	23,859	911
35 to 44 years	357,123	625	12,821	56,109	104,120	95,267	42,936	44,291	954
45 to 54 years	251,977	384	11,616	49,104	74,963	58,652	25,342	31,059	877
55 to 64 years	128,701	205	8,378	33,175	38,635	24,405	9,979	13,371	553
65 years and over	61,881	89	6,388	21,572	17,885	8,119	3,098	4,355	375
Professional workers	93,940	212	2,521	11,438	18,709	21,393	14,897	24,473	297
15 to 24 years	13,851	89	1,294	4,706	4,806	2,091	596	232	37
25 to 34 years	32,496	57	585	3,130	7,392	9,228	6,071	5,944	89
35 to 44 years	24,596	41	269	1,775	3,238	5,412	4,597	9,190	74
45 to 54 years	14,153	12	224	1,000	1,870	2,865	2,332	5,793	57
55 to 64 years	6,619	13	117	577	973	1,416	1,004	2,496	23
65 years and over	2,225		32	250	430	381	297	818	17

¹ Includes 789 workers not listed in a subsection whose occupation was unknown.

TABLE 2. *Income Received During 1934 by Employed Workers, by Age and Occupational Groups—Continued*

Age group	Total workers	Workers with no income	Workers with total income of—						
			\$1-\$100	\$200-\$499	\$500-\$999	\$1,000-\$1,499	\$1,500-\$1,999	\$2,000 and over	Unknown
Proprietors, managers and officials	280,357	278	14,835	75,132	73,789	47,631	24,040	43,528	1,124
15 to 24 years	9,603	37	800	3,569	2,882	1,554	406	220	66
25 to 34 years	42,639	50	1,670	9,610	10,743	9,283	5,170	5,986	127
35 to 44 years	71,904	59	2,281	14,271	17,338	13,888	8,371	15,421	275
45 to 54 years	73,465	65	3,153	17,944	19,939	12,647	6,168	13,282	267
55 to 64 years	50,656	39	3,391	16,497	14,130	7,165	2,869	6,354	211
65 years and over	32,090	28	3,480	13,241	8,757	3,094	1,056	2,256	178
Clerical workers	247,090	1,025	11,290	30,489	79,962	67,498	29,864	26,376	586
15 to 24 years	61,258	571	7,626	15,333	26,614	9,281	1,320	301	162
25 to 34 years	80,791	300	1,742	6,621	27,438	27,382	10,677	6,463	168
35 to 44 years	56,461	75	908	3,728	13,361	17,708	10,311	10,264	106
45 to 54 years	30,571	52	563	2,470	7,489	8,618	4,976	6,315	88
55 to 64 years	13,051	19	284	1,456	3,538	3,389	1,968	2,357	40
65 years and over	4,958	8	167	831	1,522	1,120	612	676	22
Skilled workers	213,324	386	5,666	24,224	62,764	70,394	31,618	17,998	274
15 to 24 years	15,604	113	1,624	3,535	6,120	3,349	686	128	49
25 to 34 years	57,926	114	989	5,927	18,357	20,503	7,985	3,991	60
35 to 44 years	71,432	90	1,288	6,314	19,069	25,140	12,095	7,374	62
45 to 54 years	45,741	40	1,003	5,054	12,648	14,998	7,546	4,399	53
55 to 64 years	17,405	28	514	2,330	5,152	5,059	2,657	1,624	41
65 years and over	5,216	1	248	1,064	1,418	1,345	649	482	9
Semiskilled workers	342,760	1,416	24,843	73,592	134,689	84,261	18,461	4,580	918
15 to 24 years	66,616	618	10,743	21,533	24,679	7,932	883	73	155
25 to 34 years	109,622	364	5,277	19,878	45,756	30,640	6,232	1,290	185
35 to 44 years	87,686	249	3,881	14,891	34,266	26,035	6,457	1,726	181
45 to 54 years	50,282	83	2,732	9,568	19,260	13,917	3,522	1,025	175
55 to 64 years	20,342	69	1,369	5,063	7,769	4,521	1,017	389	145
65 years and over	8,212	33	841	2,650	2,959	1,216	350	77	77
Unskilled workers	220,418	881	35,825	83,904	69,805	24,620	3,428	939	1,016
15 to 24 years	59,535	462	18,368	26,621	11,649	1,805	146	19	465
25 to 34 years	48,697	142	5,011	18,342	17,704	6,329	802	178	189
35 to 44 years	44,829	111	4,183	15,110	16,839	7,077	1,098	307	104
45 to 54 years	37,619	111	3,940	13,053	13,748	5,599	790	239	139
55 to 64 years	20,576	36	2,703	7,251	7,067	2,847	458	150	64
65 years and over	9,162	19	1,620	3,527	2,798	963	134	46	55

Industry and Income of Employed Workers

The industry group for which the lowest median income was reported for 1934 was forestry and fishing, the amount being only \$349. The agricultural workers and the domestic and personal service workers also had very low incomes—\$453 and \$482, respectively. The highest average income, \$1,332, was received by persons employed in public service. The incomes in various other industry groups are also given in table 3.

TABLE 3.—*Median¹ Income During 1934 of Employed Workers in Selected Industries*

Industry	State total	Industry	State total
Industry ascertained	\$840	Manufacturing and mechanical industries—Continued	
Agriculture	453	Food and allied industries	\$915
Forestry and fishing	349	Iron, steel, machinery, and vehicle industries	924
Extraction of minerals	681	Automobile factories	934
Manufacturing and mechanical industries	907	Other iron, steel, machinery, and vehicle	889
Building and construction	841		
Chemical and allied industries	1,178		

¹ Unknown-income group excluded.

TABLE 3.—*Median Income During 1934 of Employed Workers in Selected Industries—Continued*

Industry	State total	Industry	State total
Manufacturing and mechanical industries—Continued.		Trade.....	\$1,021
Lumber and furniture industries.....	\$673	Wholesale and retail trade.....	975
Paper, printing, and allied industries.....	938	Banking, brokerage, insurance, and real estate.....	1,323
Other manufacturing industries.....	851	Other trade.....	853
Transportation and communication.....	1,050	Public service, not elsewhere classified ¹	1,332
Construction and maintenance of streets, etc.....	616	Professional and semiprofessional service ²	1,094
Transportation and communication—Continued.		Domestic and personal service.....	482
Steam and street railroads.....	1,269	Hotels, restaurants, boarding houses, etc. ⁴	664
Truck, transfer and cab companies.....	914	Domestic and personal service not elsewhere classified ⁵	411
Other transportation and communication.....	1,161		

¹ Includes city officials, inspectors, sheriffs, and soldiers.

² Includes recreation and amusement.

⁴ Includes laundries, cleaning, dyeing, and pressing shops, and similar establishments.

⁵ Includes barbers, bootblacks, trappers, servants, and waiters (not in commercial establishment).



WAGES AND HOURS IN HUNGARY, OCTOBER 1, 1935

AVERAGE hourly wages and weekly hours of labor in certain industrial occupations in Hungary on October 1, 1935,¹ are shown in the following table. The printing industry and the building trades showed the highest wage rates. The shortest workweek was found in the printing trades and the longest in the paper industry.

Average Hourly Wages and Weekly Hours of Labor in Specified Industries in Hungary, Oct. 1, 1935

[Average exchange rate of pengő (100 fillér) in 1935 = 29.6 cents]

Industry and occupation	Average hourly wages (in fillér) —					Average weekly hours of labor	
	In Budapest	In Provinces	Per worker				
			Male	Female	Both sexes		
Wood and bone working:							
Sawyers.....	47	35	42	—	42	53	
Joiners.....	61	32	51	—	51	48	
Cabinet makers.....	73	41	60	—	60	49	
Polishers.....	53	25	50	45	47	48	
Laborers.....	30	14	22	14	21	50	
Hides, hair and feathers:							
Leather workers.....	39	51	47	26	44	52	
Tanners.....	58	60	60	—	60	53	
Laborers.....	31	36	37	28	33	54	
Textiles:							
Spinners and weavers.....	53	35	47	36	41	52	
Lace makers.....	40	31	55	36	39	53	
Wool dyers.....	50	35	51	37	48	50	
Wool spinners and weavers.....	50	40	47	45	46	56	
Dyers, fabrics.....	68	41	51	32	50	52	
Upholsterers.....	68	55	64	—	64	48	
Laborers.....	28	22	20	22	27	58	

¹ Hungary. L'Office Central Royal Hongrois de Statistique. Annuaire Statistique Hongrois, 1935. Budapest, 1937, p. 50.

*Average Hourly Wages and Weekly Hours of Labor in Specified Industries
in Hungary, Oct. 1, 1935—Continued*

Industry and occupation	Average hourly wages (in fillérö)—					Aver- age weekly hours of labor	
	In Buda- pest	In Prov- vinces	Per worker				
			Male	Female	Both sexes		
Clothing:							
Shoemakers.....	53	33	49	26	40	49	
Hat makers.....	46	-----	65	36	46	51	
Tailors—							
Men's clothing.....	64	70	66	-----	66	49	
Women's clothing.....	55	-----	88	49	55	48	
Furriers.....	72	59	76	58	68	51	
Paper:							
Paper-factory workers.....		51	56	35	51	64	
Bookbinders.....	81	51	104	50	76	42	
Laborers.....		39	41	28	39	65	
Food:							
Bakers.....	72	47	66	43	64	50	
Laborers.....	45	28	48	30	44	50	
Building trades:							
Masons.....	67	48	62	-----	62	52	
Carpenters.....	63	41	49	-----	49	52	
Plumbers.....	96	-----	96	-----	96	46	
Steel-construction workers.....	50	23	39	-----	39	51	
Cement workers.....	41	29	41	23	36	51	
House painters.....	63	44	58	-----	58	49	
Laborers.....	32	19	28	23	26	54	
Printing:							
Composers—							
Hand.....	196	126	174	-----	174	41	
Machine.....	231	132	190	-----	190	40	
Machine operators.....	168	125	155	-----	155	41	
Printer's helpers.....	84	44	85	55	68	40	
Transportation:							
Motormen.....	58	-----	58	-----	58	48	
Conductors.....	58	-----	58	-----	58	48	
Automobile drivers.....	77	60	71	-----	71	55	
Teamsters.....	45	32	39	-----	39	56	
Porters.....	36	-----	36	-----	36	23	
Track laborers.....	27	28	27	-----	27	47	
Community service:							
Laborers.....	54	-----	54	46	54	51	



WAGES AND COST OF LIVING IN LATVIA, 1930 TO 1937

THE depression was hardest in Latvia in the period 1931 to 1934. Markets, especially foreign export markets, were considerably curtailed, causing widespread unemployment in the country. As a result, prices, cost of living, and wages of industrial workers fell during the period 1930 to 1935, as shown by the official statistics quoted below.¹

Table 1 shows the average hourly wages in 1930, 1936, and January 1937, of the workers in industrial establishments employing 20 or more workers in the city of Riga, the capital and largest industrial center of the country, with a population of about 400,000.

During the period 1930 to 1937, average hourly wages declined about 14 percent.

¹ Latvia. Bureau de Statistique. Bulletin Mensuel, Riga, April 1937, pp. 241-247.

However, wages showed a slight increase in January 1937 over those in 1936. The tendency upward is explained by the recovery of Latvia from the depression. Unemployment has been replaced by a shortage of labor. As a result the country is importing foreign labor from Poland and even Czechoslovakia.

TABLE 1.—*Average Hourly Wages¹ in Riga, Latvia, 1930, 1936, and January 1937, by Industry*

[Lat (100 santimi) at par=32.67 cents]

Industry ² and year	All skilled workers	Average hourly wages (in santimi) of—					
		Skilled workers		Unskilled workers		Young workers	
		Male	Female	Male	Female	Male	Female
Ceramic, stone, chalk, lime, cement, etc.:							
1930.....	89	—	—	57	28	37	26
1936.....	81	—	—	53	27	30	30
January 1937.....	81	—	—	52	27	27	23
Glass works:							
1930.....	91	—	—	51	27	—	40
1936.....	86	—	—	44	25	—	36
January 1937.....	86	—	—	46	25	—	37
Chemical:							
1930.....	73	51	57	36	33	27	—
1936.....	66	56	55	38	36	22	—
January 1937.....	68	60	54	36	—	20	—
Rubber goods:							
1930.....	73	51	63	38	30	26	—
1936.....	66	56	64	40	36	22	—
January 1937.....	65	60	63	39	—	20	—
Woodworking:							
1930.....	72	—	—	59	28	33	—
1936.....	54	—	—	47	27	15	—
January 1937.....	55	—	—	47	29	10	—
Sawmills:							
1930.....	72	—	—	57	26	33	—
1936.....	52	—	—	42	20	25	—
January 1937.....	55	—	—	42	21	—	—
Metallurgy, machine construction, and tool making:							
1930.....	81	53	59	35	39	27	33
1936.....	62	47	48	30	27	—	22
January 1937.....	62	45	49	30	25	—	23
Shipbuilding and construction of vehicles:							
1930.....	85	—	—	62	39	54	—
1936.....	58	—	—	45	32	31	—
January 1937.....	57	—	—	46	32	30	—
Leather and hides:							
1930.....	³ 103	⁴ 86	—	71	33	—	—
1936.....	³ 74	⁴ 64	—	68	32	—	—
January 1937.....	³ 69	⁴ 66	—	64	35	—	—
Textiles:							
1930.....	68	42	49	33	39	27	25
1936.....	59	39	47	32	23	25	25
January 1937.....	50	39	47	33	22	27	25
Paper:							
1930.....	65	—	—	47	29	17	18
1936.....	48	—	—	39	26	19	18
January 1937.....	45	—	—	38	28	20	18
Printing trades:							
1930.....	127	121	62	46	⁴ 24	—	36
1936.....	94	78	50	35	⁴ 21	—	30
January 1937.....	95	89	51	36	⁴ 21	—	30
Food, drinks, condiments, and tobacco:							
1930.....	87	—	—	59	34	20	26
1936.....	67	—	—	46	28	18	20
January 1937.....	67	—	—	42	27	17	20
Tobacco:							
1930.....	121	—	—	67	38	—	—
1936.....	137	—	—	60	35	—	—
January 1937.....	135	—	—	61	34	—	—

See footnotes at end of table.

TABLE 1.—*Average Hourly Wages¹ in Riga, Latvia, 1930, 1936, and January 1937, by Industry—Continued*

[Lat (100 santimi) at par = 32.67 cents]

Industry ² and year	Average hourly wages (in santimi) of—						Apprentices
	All skilled workers	Skilled workers		Unskilled workers		Young workers	
		Male	Female	Male	Female	Male	Female
Cleaning and sanitation:							
1930.....	73	44	45	40	—	—	—
1936.....	60	34	43	36	—	—	—
January 1937.....	60	32	45	37	—	—	—
Building and road construction:							
1930.....	78	—	53	37	—	—	22
1936.....	59	—	43	30	—	—	27
January 1937.....	60	—	43	30	—	—	27
Gas, electricity, etc.:							
1930.....	97	—	84	—	—	—	—
1936.....	57	—	45	—	—	—	—
January 1937.....	58	—	46	—	—	—	—
Clothing trades:							
1930.....	78	44	56	36	—	23	19
1936.....	63	39	44	32	—	18	17
January 1937.....	58	38	44	32	—	17	20
Boots and shoes:							
1930.....	76	43	57	34	—	—	20
1936.....	60	37	50	31	—	—	19
January 1937.....	51	33	41	32	—	—	14
Average, all industries:							
1930.....	84	44	59	33	—	—	—
1936.....	65	40	49	30	—	—	—
January 1937.....	66	40	48	31	—	—	—
Hourly earnings—index, all industries:							
1930.....	100.0	100.0	100.0	100.0	—	—	—
1936.....	77.4	90.9	83.1	90.9	—	—	—
January 1937.....	78.6	90.9	81.4	93.9	—	—	—

¹ Includes supplements, overtime and piece-rate earnings; but excludes contributions to social insurance.

² Covers establishments employing 20 or more workers.

³ Tanners.

⁴ Both sexes.

Table 2 shows the average hourly wages of workers in Latvia outside of Riga in July–December 1936 and in January 1937. Wages in January 1937 had increased by about 2 santimi, on an average, over those in July–December 1936.

TABLE 2.—*Hourly Earnings¹ in Latvia (Excluding Riga) in July–December 1935 and in December 1936, by Occupation*

Occupation	Average hourly earnings (in santimi) in—		Occupation	Average hourly earnings (in santimi) in—	
	July-December 1935	December 1936		July-December 1935	December 1936
Locksmiths.....	48	46	Bakers.....	53	61
Weavers.....	37	38	Machinists.....	47	50
Weavers, female.....	23	22	Millers.....	43	43
Hand compositors.....	51	60	Coopers.....	42	48
Machine compositors, female.....	73	58	Masons.....	54	59
Hand compositors, female.....	37	49	Carpenters.....	45	56
Metal turners.....	54	49	Polishers.....	42	45
Electrical installers.....	47	48	Sawyers.....	44	47
Cabinet makers.....	35	40	Spinners.....	45	26
Joiners, building.....	44	44	Skilled workers.....	44	48
Printers.....	63	54	Male.....	24	25
Blacksmiths.....	49	51	Female.....	—	—
Carders.....	27	29	Unskilled workers.....	39	40
Painters, house.....	33	36	Male.....	23	23
			Female.....	—	—

¹ Includes supplement, overtime, and piece-rate earnings; but excludes contributions to social insurance. Covers establishments employing 15 or more workers.

Table 3 shows the cost-of-living index in Riga and 19 provincial cities. From 1930 to January 1937 the cost of living in Riga for salaried employees decreased 17 percent and for wage earners 31 percent, and in 19 provincial cities for salaried employees it fell 18 percent and for wage earners 25 percent.

TABLE 3.—*Cost-of-Living Index in Riga and 19 Provincial Cities in Latvia in 1935, 1936, and January and February 1937*

[1930=100]

Class of workers and locality	1935	1936	January 1937
Salaried employees:			
Riga	80	80	83
19 provincial cities	77	78	82
Wage earners:			
Riga	73	73	69
19 provincial cities	72	73	75

Employment Offices

OPERATIONS OF UNITED STATES EMPLOYMENT SERVICE, MAY 1937

REPORTS of operations of the United States Employment Service for May reveal more jobs filled in private industry than in any month since the Service was established, and the smallest file of active applicants in three years.

The upward trend of private placements, which has characterized the operations of the United States Employment Service for the past year, continued in May, carrying placements in private industry in that month to an all-time high, 240,703. This was nearly 10 percent greater than the number of private placements in April 1937 and 80 percent above the figure for May 1936.

Of the total placements in private employment, men filled 156,459 or 65 percent of the jobs. Private placements of men increased 11 percent from the preceding month. Placements of women totaled 84,244, or 7.6 percent more than in April.

In addition to private placements, the Service filled 134,127 jobs in public employment in May, about 9 percent more than in April but 45 percent less than in May 1936. These placements included nonrelief jobs filled in Federal, State, and local governmental employment, but since most of them were placements on public-construction undertakings, almost all of the workers placed were men.

Placements at security wages on relief projects during the month dropped to 5,189, which was 24.6 percent less than in the preceding month and 94 percent less than in May 1936. Placements of this kind, which at one time formed a large part of the placement activities of the Service, are becoming less and less important; and the employment offices, as a consequence, are able to concentrate their activities increasingly on filling jobs in private industry and trade.

The total placements of all types during May was 380,019, an increase of 9 percent over April. Because of the reduced number of jobs filled in public and relief employment, however, total placements in May 1937 were 19 percent less than in May 1936.

The increase in private placements from April to May appears to be characteristic of a general change between these two months in other

years. In every year since the Service was established in 1933, May has shown more private placements than April.

In the current year, the increase was widespread throughout the Nation. Only 15 States recorded fewer placements in May than in April, of which 5 were in the plains area of the West North Central region and 3 in the South Atlantic States.

One factor in the general rise in private placements has been the greatly increased activity in acquainting employers with the facilities offered by the Service. The number of field visits made by representatives of the Service in May 1937 was 171,558, slightly fewer than in April but nearly double the number in May 1936.

The decline in the number of active applicants registered with the Service, which was interrupted in April, was resumed in May. Except for April, every month since October 1936 has shown a smaller total active file; and the figure in May reached an all-time low of 5,309,541. This was 3.8 percent smaller than the active file in April, and 40 percent below the figure for May 1936. The decrease for the month was confined almost entirely to male applicants, of whom there were 4,156,877, or 4.6 percent less than in April. Female applicants numbered 1,152,664, only fractionally fewer than in April.

The reduction in the size of the active file coincided with the experience of earlier years, in all of which the number of active applicants was less in May than in April. More significantly, the continued decline through the current year likewise coincides with other indexes of fluctuations in employment and unemployment, all of which suggest that the rising tide of employment is steadily reducing the number of unemployed.

Similarly, the downward trend in the number of new applications to the Service was resumed in May after an interruption of 2 months. New applicants in May numbered 272,125, which was 5.5 percent less than in April and 8 percent less than in May 1936. With the exception of 2 months in 1935 and 1 month in 1937, the current reports of new applicants were the smallest since the first month of the operation of the Service. As in the case of the active file, the decline in new applications was greater among men than among women—6.3 percent compared to 3.8 percent.

Registration and placement of war veterans by offices in May show similar trends to those of nonveterans. The following table indicates the principal operating activity of veterans during the month.

TABLE 1.—*Summary of Veterans' Activities, May 1937*

Activities	Number	Percent of change from—		
		April 1937	May 1936	May 1935
New applications	9,478	-11.3	+4.3	-53.0
Total placements	24,090	+7.5	-30.0	-30.7
Private	12,756	+12.8	+84.3	+60.6
Public	10,898	+3.2	-50.8	-59.4
Relief	436	-18.0	-91.8	(1)
Active file	295,181	-5.1	-41.3	-29.5

¹ Relief placements not reported for 1935.

The summary table below indicates the principal operating totals for May, and the percentage changes from the results of the same month in preceding years. Table 3 gives State-by-State reports of activities, together with the number of registrations and placements of men and women. Veterans' activities are presented in table 4.

TABLE 2.—*Operations of the United States Employment Service, May 1937*

Activities	Number	Percent of change from—		
		April 1937	May 1936	May 1935
New applications	272,125	-5.5	-8.0	-28.3
Total placements	380,019	+8.9	-18.9	+30.8
Private	240,703	+9.7	+79.9	+114.6
Public	134,127	+9.4	-44.9	-15.1
Relief	5,189	-24.6	-94.3	-74.5
Active file	5,309,541	-3.8	-39.7	-12.9

TABLE 3.—*Operations of United States Employment Service, May 1937*

TOTAL

State	Placements					New applications	Active file	May 31, 1937	Percent of change from Apr. 30, 1937		
	Private		Public		Relief ¹						
	Total	Number	Percent of change from April	Number	Number	Percent of change from April					
United States	380,019	240,703	+9.7	134,127	+9.4	5,189	272,125	-5.5	5,309,541	-3.8	
Alabama	7,457	5,649	+68.6	1,788	-3.7	20	4,883	+5.2	79,820	+5.2	
Arizona	2,220	1,122	+10.4	1,073	+6.4	25	1,131	-23.1	20,307	+2.5	
Arkansas	3,462	1,266	0	1,935	-3.4	261	3,144	-6.7	60,401	+2.1	
California	27,658	19,085	+22.2	7,960	+3.3	13	20,719	-10.1	218,769	-5.4	
Colorado	6,137	4,127	+76.1	1,929	-4	81	3,520	-11.4	55,336	-6.0	
Connecticut	3,994	3,026	+4.7	968	-17.5	0	4,727	+22.2	48,618	+3.9	
Delaware	1,842	1,246	+35.3	595	+13.3	1	1,274	+52.4	10,078	-7.7	
Florida	5,752	3,565	-18.3	2,111	-27.6	76	5,379	+13.5	64,444	+3.6	
Georgia	6,446	3,652	+12.1	2,773	+20.9	21	4,317	+4.8	121,797	-2.1	
Idaho	2,413	1,360	+39.8	1,048	+55.7	5	1,770	+19.0	19,029	-2.0	
Illinois	28,355	22,977	+11.0	5,002	+8.1	376	20,235	-10.0	307,884	-4.7	
Indiana	7,337	5,902	+1.8	1,430	-14.9	5	8,525	-9.2	119,453	-5.6	
Iowa	9,933	5,988	+5.7	3,903	+36.3	42	4,812	-10.2	59,897	-6.8	
Kansas	5,049	2,060	-8.6	2,979	-19.9	10	2,898	-21.4	71,192	-2.1	
Kentucky	5,778	3,202	-8.4	2,565	+22.6	11	0,330	+14.5	146,092	-1.5	
Louisiana	2,666	1,616	+2.0	1,045	+47.8	5	4,365	+11.2	73,536	-9.5	
Maine	1,767	270	-20.4	1,497	+136.9	0	979	+12.9	23,737	-6.5	
Maryland	3,020	1,874	+9.8	1,145	-20.8	1	2,074	-17.3	50,564	-7.3	
Massachusetts	3,897	2,350	+6.4	1,538	+5.0	9	5,143	-1.4	292,476	-1.3	
Michigan	13,102	9,271	+9.4	3,240	+76.0	591	9,128	+1.2	132,453	-5.1	
Minnesota	10,338	6,997	+9.9	3,272	+52.4	69	5,539	-18.8	128,163	-2.6	
Mississippi	5,041	127	+36.6	4,816	+3.9	98	5,814	+41.3	84,022	+1	
Missouri	8,167	4,176	-6.7	3,895	-11.9	96	6,481	-10.3	198,961	-4.0	
Montana	3,984	1,045	+22.9	2,832	+105.4	107	1,588	+12.4	32,336	-5.9	
Nebraska	4,347	1,888	-5	2,417	-10.7	42	2,988	-9.4	44,864	-3.3	
Nevada	1,380	445	-1.5	935	-8.0	0	871	-8.4	4,475	-9.4	
New Hampshire	1,144	574	-25.0	569	+29.6	1	774	-8.8	19,785	-6.4	
New Jersey	6,791	5,634	+16.6	1,129	-14.6	28	7,305	-13.1	189,361	-0.8	
New Mexico	2,204	1,114	+53.0	1,082	-18.8	8	1,158	-3	33,671	+1.5	
New York	28,837	20,693	+7.7	8,097	+1.5	47	19,026	-17.2	360,461	-5.6	
North Carolina	9,375	4,863	-5.6	4,511	-1.7	1	6,891	+2.9	84,210	-5.6	
North Dakota	4,012	1,441	-4.1	2,441	+155.6	130	2,042	+8.5	33,960	+7	
Ohio	25,916	20,154	+10.2	5,301	+14.8	461	12,700	-18.0	292,976	-2.8	
Oklahoma	7,048	4,513	-21.9	2,515	-6.3	20	4,101	-6.8	117,685	-4	
Oregon	4,114	2,081	+35.5	2,030	+43.0	3	3,255	+8.0	45,929	-7.4	
Pennsylvania	19,082	8,403	-8.0	9,126	+12.8	1,553	15,545	-6.3	761,779	-4.5	

¹ Includes only security-wage placements on work-relief projects.

TABLE 3.—*Operations of United States Employment Service, May 1937—Continued*

TOTAL—Continued

State	Placements					New applications		Active file		
	Total	Private		Public		Relief ¹	Number	Percent of change from April	May 31, 1937	Percent of change from Apr. 30, 1937
		Number	Percent of change from April	Number	Percent of change from April					
Rhode Island	1,272	900	+10.8	324	-29.1	48	1,417	-12.4	38,936	+1.7
South Carolina	5,327	1,858	-13.4	3,451	+14.2	18	2,683	+9.4	52,547	-.1
South Dakota	3,506	1,209	-5.5	2,281	+60.1	16	1,843	+15.3	45,197	-10.6
Tennessee	5,670	2,414	+26.2	3,244	+7.1	12	4,758	-8.9	164,366	-5.2
Texas	35,735	28,426	+18.2	7,125	-15.3	184	24,079	-1.1	194,985	+1.1
Utah	2,133	1,183	+25.3	949	-.9	1	1,268	+7.2	18,636	-4.2
Vermont	1,522	789	+27.3	733	+170.5	0	757	+6.9	5,587	-16.4
Virginia	7,423	3,767	+15.3	3,641	-4.1	15	3,999	-16.9	59,859	-10.1
Washington	7,220	2,473	-17.0	4,507	+63.4	240	4,728	-4.2	73,236	-3.0
West Virginia	4,182	2,750	+15.2	1,428	-8.0	4	2,590	-16.6	89,555	-4.0
Wisconsin	10,731	7,288	+18.1	3,295	+48.0	148	9,308	-2.9	114,673	-5.3
Wyoming	2,549	776	+13.5	1,487	-3.8	286	1,113	+11.3	7,120	-10.3
Dist. of Columbia	2,684	2,514	+6.0	170	-31.7	0	2,151	-17.4	27,314	+7.4

MEN

United States	294,345	156,459	+10.8	133,253	+9.6	4,633	184,084	-6.3	4,156,877	-4.6
Alabama	5,941	4,155	+54.3	1,768	-4.2	18	3,459	+5.4	58,105	+4.6
Arizona	1,910	823	+29.6	1,065	+6.0	22	885	-22.6	16,743	+2.7
Arkansas	3,039	852	+6.9	1,927	-3.1	260	2,412	-8.7	48,857	+2.1
California	22,465	14,541	+32.2	7,911	+3.2	13	14,394	-6.1	161,085	-6.7
Colorado	5,154	3,159	+107.6	1,916	-.4	79	2,442	-10.2	42,960	-7.5
Connecticut	2,706	1,760	+4.6	946	-18.9	0	2,673	+11.4	36,528	+1.4
Delaware	1,232	639	+12.5	593	+13.8	0	620	+38.7	7,185	-13.1
Florida	4,729	2,558	-24.3	2,105	-27.5	66	3,555	+14.0	48,711	+3.1
Georgia	5,149	2,387	-11.1	2,752	+20.7	10	2,929	+1.2	84,832	-3.5
Idaho	2,044	992	+64.0	1,047	+57.2	5	1,446	+25.3	16,642	-1.9
Illinois	19,919	14,663	+15.3	4,934	+8.1	322	13,438	-9.6	250,541	-4.9
Indiana	4,815	3,386	+2.5	1,424	-14.9	5	5,905	-11.6	98,070	-4.4
Iowa	7,875	3,957	+9.0	3,878	+37.0	40	3,122	-15.0	48,396	-8.4
Kansas	4,556	1,579	-6.5	2,971	-20.0	6	2,140	-19.1	57,186	-2.5
Kentucky	4,695	2,136	-10.9	2,548	+23.4	11	4,243	+13.8	115,595	-2.3
Louisiana	2,060	1,014	+11.1	1,043	+49.4	3	3,054	+20.1	58,694	-9.4
Maine	1,663	166	+29.7	1,497	+137.6	0	777	+22.9	20,929	-7.5
Maryland	2,531	1,390	+11.2	1,141	-20.8	0	1,541	-15.6	40,597	-8.5
Massachusetts	2,840	1,319	+12.3	1,514	+4.6	7	3,314	-5.3	214,775	-1.8
Michigan	10,428	6,659	+10.2	3,215	+77.8	554	6,351	-2.2	112,050	-5.4
Minnesota	7,646	4,315	+16.1	3,264	+53.2	67	3,512	-23.3	105,452	-2.9
Mississippi	5,011	102	+155.0	4,814	+3.9	95	4,671	+28.6	61,116	-.4
Missouri	6,599	2,682	-7.9	3,889	-11.9	28	4,156	-15.3	160,248	-4.7
Montana	3,819	892	+29.3	2,822	+106.4	105	1,312	+18.3	26,864	-6.6
Nebraska	3,647	1,198	+5.6	2,408	-10.5	41	2,005	-10.3	37,051	-4.0
Nevada	1,289	357	-11.9	932	-8.0	0	760	-8.1	3,725	-10.3
New Hampshire	901	337	-35.3	564	+29.7	0	475	-12.2	15,274	-8.7
New Jersey	4,067	2,917	+25.4	1,123	-13.7	27	4,710	-13.9	149,949	-12.2
New Mexico	1,924	845	+56.8	1,071	-19.2	8	780	-9.6	28,304	+1.3
New York	19,358	11,286	+13.4	8,027	+1.6	45	11,938	-18.4	296,936	-6.1
North Carolina	7,083	2,592	-15.4	4,490	-1.7	1	4,775	+3.4	57,321	-6.0
North Dakota	3,614	1,054	-1.8	2,431	+162.2	129	1,538	+8.1	27,952	+4.4
Ohio	17,651	11,949	+11.7	5,253	+14.9	449	8,188	-19.6	232,352	-3.0
Oklahoma	5,308	2,801	-31.2	2,488	-6.3	19	2,630	-14.1	96,663	-.8
Oregon	3,618	1,599	+46.4	2,017	+42.7	2	2,346	+13.9	37,705	-7.8
Pennsylvania	15,207	4,907	-6.0	8,960	+13.7	1,340	9,934	-7.1	594,781	-5.4
Rhode Island	759	407	+3.0	324	-29.1	28	783	-18.2	28,438	+1.5
South Carolina	4,672	1,212	-27.6	3,444	+14.2	16	2,191	+18.9	35,538	-0.0
South Dakota	3,201	919	-9.9	2,269	+61.0	13	1,230	+9.7	37,950	-12.4
Tennessee	4,722	1,472	+39.3	3,239	+6.9	11	3,350	-8.4	128,232	-5.8
Texas	20,324	22,048	+17.1	7,098	-15.2	178	16,412	-5.2	143,705	-1.0
Utah	1,827	883	+36.9	943	-.4	1	813	-0.7	16,085	-6.1
Vermont	1,212	481	+34.0	731	+172.8	0	506	+8.1	4,361	-20.0
Virginia	5,255	1,608	-25.3	3,636	-3.7	11	3,079	-13.1	43,599	-10.2
Washington	6,616	1,943	-22.0	4,496	+63.8	177	3,502	-6.9	61,560	-4.8
West Virginia	3,065	1,651	+13.2	1,414	-8.1	0	1,682	-15.6	73,130	-4.5
Wisconsin	7,667	4,238	+20.6	3,287	+48.8	142	5,976	-3.4	89,793	-6.1
Wyoming	2,307	555	+41.6	1,473	-3.2	279	902	+14.8	5,736	-11.6
Dist. of Columbia	1,225	1,074	+18.2	151	-31.1	0	1,228	-18.4	18,576	+6.5

¹ Includes only security-wage placements on work-relief projects.

TABLE 3.—*Operations of United States Employment Service, May 1937—Continued*

WOMEN

State	Placements						New applications	Active file		
	Total	Private		Public		Relief ¹		May 31, 1937	Percent of change from Apr. 30, 1937	
		Number	Percent of change from April	Number	Percent of change from April					
United States.....	85,674	84,244	+7.6	874	-17.4	556	88,041	-3.8	1,152,664	-0.9
Alabama.....	1,516	1,494	+127.1	20	+100.0	2	1,424	+4.9	21,715	+7.0
Arizona.....	310	299	-21.5	8	+166.7	3	246	-24.5	3,564	+1.6
Arkansas.....	423	414	-11.7	8	-46.7	1	732	-1.4	11,544	+1.8
California.....	5,193	5,144	+.6	49	+8.9	0	6,325	-18.1	57,684	-1.5
Colorado.....	983	968	+17.9	13	-7.1	2	1,078	-14.1	12,376	-2
Connecticut.....	1,288	1,266	+4.8	22	+214.3	0	2,054	+39.8	12,090	+16.1
Delaware.....	610	607	+72.0	2	-50.0	1	654	+68.1	2,893	+9.5
Florida.....	1,023	1,007	+2.2	6	-50.0	10	1,824	+12.4	15,733	+5.4
Georgia.....	1,297	1,265	+120.0	21	+61.5	11	1,388	+13.3	36,965	+1.3
Idaho.....	369	368	0.0	1	-85.7	0	324	-3.0	2,387	-2.7
Illinois.....	8,436	8,314	+4.0	68	+4.6	54	6,797	-10.7	57,343	-3.7
Indiana.....	2,522	2,516	+.8	6	0.0	0	2,620	-3.1	21,383	-10.5
Iowa.....	2,058	2,031	0.0	25	-26.5	2	1,690	+.1	11,501	+.3
Kansas.....	493	481	-14.9	8	+60.0	4	758	-27.1	14,066	-.3
Kentucky.....	1,083	1,066	-3.0	17	-41.4	0	2,087	+15.9	30,497	+1.5
Louisiana.....	606	602	-10.4	2	-77.8	2	1,311	-5.3	14,842	-9.5
Maine.....	104	104	-50.7	0	0.0	0	202	-14.0	2,808	+2.1
Maryland.....	489	484	+6.1	4	0.0	1	533	-21.8	9,967	-2.4
Massachusetts.....	1,057	1,031	-.2	24	+33.3	2	1,829	+6.5	77,701	+.2
Michigan.....	2,674	2,612	+7.2	25	-24.2	37	2,777	+9.9	20,403	-3.5
Minnesota.....	2,692	2,682	+1.2	8	-50.0	2	2,027	-9.9	22,711	-1.1
Mississippi.....	30	25	-52.8	2	+100.0	3	1,143	+136.6	22,906	+1.4
Missouri.....	1,568	1,494	-4.5	6	-40.0	68	2,325	+.2	38,713	-.6
Montana.....	165	153	-4.4	10	-16.7	2	276	-9.2	5,472	-2.4
Nebraska.....	700	690	-9.6	9	-35.7	1	983	-7.6	7,813	-.1
Nevada.....	91	88	+87.2	3	0.0	0	111	-10.5	750	-4.7
New Hampshire.....	243	237	-2.9	5	+25.0	1	299	-2.9	4,511	+2.1
New Jersey.....	2,724	2,717	+8.5	6	-70.0	1	2,595	-11.7	39,412	+1.3
New Mexico.....	280	269	+42.3	11	+57.1	0	378	+26.8	5,367	+2.9
New York.....	9,479	9,407	+1.5	70	-11.4	2	7,088	-15.2	72,525	-3.6
North Carolina.....	2,292	2,271	+8.9	21	-12.5	0	2,116	+2.0	26,889	-4.7
North Dakota.....	398	387	-9.8	10	-64.3	1	504	+9.8	6,008	+2.3
Ohio.....	8,265	8,205	+8.0	48	+4.3	12	4,512	-15.0	60,624	-1.7
Oklahoma.....	1,740	1,712	+.1	27	-6.9	1	1,471	+9.8	21,022	+1.1
Oregon.....	496	482	+8.6	13	+85.7	1	909	-4.8	8,224	-5.5
Pennsylvania.....	3,875	3,496	-10.7	166	-21.0	213	5,611	-5.0	166,998	-1.1
Rhode Island.....	513	493	+18.2	0	0.0	20	634	-3.9	10,498	+2.3
South Carolina.....	655	646	+36.9	7	0.0	2	492	-19.2	17,009	-.3
South Dakota.....	305	290	+12.0	12	-25.0	3	613	+28.5	7,247	+.2
Tennessee.....	948	942	+10.0	5	0.0	1	1,408	-10.0	36,134	-2.9
Texas.....	6,411	6,378	+22.2	27	-49.1	6	7,667	+8.8	51,280	+3.2
Utah.....	306	300	+.3	6	-45.5	0	455	+25.0	2,551	+9.9
Vermont.....	310	308	+18.0	2	-33.3	0	251	+4.6	1,226	-.7
Virginia.....	2,168	2,159	+93.5	5	-78.3	4	920	-27.5	16,260	-9.8
Washington.....	604	530	+7.9	11	-26.7	63	1,226	+4.3	11,676	+7.5
West Virginia.....	1,117	1,099	+18.3	14	0.0	4	908	-18.3	16,425	-1.5
Wisconsin.....	3,064	3,050	+14.9	8	-52.9	6	3,332	-2.1	24,880	-2.7
Wyoming.....	242	221	-24.3	14	-41.7	7	211	-1.4	1,393	-4.5
Dist. of Columbia.....	1,459	1,440	-1.6	19	-36.7	0	923	-16.1	8,738	+9.2

¹ Includes only security-wage placements on work-relief projects.

TABLE 4.—*Veterans' Activities of United States Employment Service, May 1937*

State	Placements						New applications		Active file	
	Total	Private		Public		Relief ¹	Number	Percent of change from April	May 31, 1937	Percent of change from Apr. 30, 1937
		Number	Percent of change from April	Number	Percent of change from April					
United States.....	24,090	12,756	+12.8	10,898	+3.2	436	9,478	-11.3	295,181	-5.1
Alabama.....	379	235	+21.8	144	+4.3	0	149	+2.1	3,553	+1.5
Arizona.....	152	61	+38.6	91	0.0	0	90	-3.2	1,254	+2.6
Arkansas.....	189	84	+25.4	92	-15.6	13	119	-25.2	2,921	+1.8
California.....	2,667	1,699	+36.5	967	-4.9	1	1,277	-0.2	15,709	-5.8
Colorado.....	390	221	+62.5	165	-13.2	4	123	-23.1	3,024	-8.5
Connecticut.....	256	185	+23.3	71	-28.3	0	148	-4.5	3,243	-.6
Delaware.....	86	45	+4.7	41	+7.9	0	11	-21.4	453	-18.4
Florida.....	403	233	+4.5	163	-3.6	7	200	-3.8	4,826	+1.0
Georgia.....	379	162	-12.0	215	+59.3	2	139	+20.9	4,277	-1.9
Idaho.....	203	79	+27.4	124	+9.7	0	70	-10.3	1,119	-6.2
Illinois.....	1,793	1,302	+27.4	465	+1.3	26	663	-16.7	18,710	-5.8
Indiana.....	388	274	+16.1	112	-39.8	2	318	-17.0	7,952	-4.4
Iowa.....	870	481	-.2	388	+11.2	1	172	-25.2	3,950	-10.5
Kansas.....	415	167	-16.5	248	-17.3	0	121	-21.4	4,327	-4.0
Kentucky.....	480	197	-18.3	281	+28.9	2	147	-10.9	6,284	-7.1
Louisiana.....	149	61	-31.5	88	+60.0	0	145	+16.0	4,108	-11.0
Maine.....	129	16	-5.9	113	+66.2	0	42	-10.6	1,751	-9.9
Maryland.....	222	146	+37.7	76	-38.7	0	83	-33.6	3,218	-9.6
Massachusetts.....	256	110	+42.9	145	-1.4	1	246	-10.9	18,980	-1.4
Michigan.....	790	508	+4.7	237	+41.9	45	461	+1.1	8,274	-5.6
Minnesota.....	702	354	+32.6	343	+48.5	5	195	-14.5	9,229	-2.9
Mississippi.....	164	4	+100.0	149	-8.0	11	100	+25.0	2,509	-2.5
Missouri.....	627	254	-3.4	371	-11.0	2	256	-29.1	11,947	-5.4
Montana.....	313	67	+1.5	238	+30.8	8	75	+7.1	1,511	-11.6
Nebraska.....	283	90	-8.2	188	-5.5	5	87	-26.3	2,674	-4.8
Nevada.....	111	34	-12.8	77	-28.7	0	48	-25.0	263	-3.3
New Hampshire.....	81	24	-42.9	57	+42.5	0	32	-5.9	1,252	-9.9
New Jersey.....	304	246	+33.0	57	-35.2	1	192	-25.6	11,070	-12.7
New Mexico.....	123	47	+4.4	75	-20.2	1	22	-52.2	1,864	-3.6
New York.....	1,344	742	+22.2	600	-7.7	2	337	-23.4	20,626	-6.2
North Carolina.....	457	201	-20.2	256	-.8	0	173	+5.5	2,972	-8.9
North Dakota.....	205	50	-20.6	149	+136.5	6	59	+37.2	1,569	-2.9
Ohio.....	1,764	1,178	+21.2	514	+.2	72	410	-17.7	16,413	-3.8
Oklahoma.....	440	241	-31.9	193	+7.7	6	148	-12.9	5,726	-2.9
Oregon.....	409	167	+35.8	242	+63.5	0	192	-4.0	4,186	-9.6
Pennsylvania.....	1,196	400	-6.5	670	0.0	126	431	-17.9	38,559	-4.1
Rhode Island.....	54	26	-25.7	28	+3.7	0	51	2,110	+5.5	
South Carolina.....	228	73	-19.8	152	-3.8	3	90	+52.5	1,955	-1.7
South Dakota.....	262	73	-27.0	188	+69.4	1	49	-3.9	2,568	-13.8
Tennessee.....	399	152	+56.7	246	+12.3	1	230	-17.3	6,690	-3.8
Texas.....	1,461	892	+13.2	550	-25.0	19	533	-15.5	8,617	-2.8
Utah.....	184	106	+47.2	78	-22.8	0	27	-27.0	1,236	-6.0
Vermont.....	73	37	+42.3	36	+260.0	0	11	-52.2	230	-29.9
Virginia.....	396	142	-21.5	254	+10.0	0	151	-5.6	2,169	-11.5
Washington.....	567	197	-15.8	347	+59.2	23	207	-16.2	5,197	-4.9
West Virginia.....	251	129	+2.4	122	+6.1	0	110	-4.3	4,446	-4.3
Wisconsin.....	715	374	+24.7	321	+37.2	20	333	-7.8	7,055	-9.0
Wyoming.....	160	32	+52.4	108	-25.0	20	56	-6.7	418	-15.6
Dist. of Columbia.....	221	158	+26.4	63	+6.8	0	149	-2.0	2,187	+5.4

¹ Includes only security-wage placements on work-relief projects.

Trend of Employment and Pay Rolls

SUMMARY OF REPORTS FOR MAY 1937

EMPLOYMENT and pay rolls continued to expand from April to May in the combined manufacturing and nonmanufacturing industries surveyed monthly by the Bureau of Labor Statistics. Based on reports received by the Bureau, it is estimated that 96,000 workers were returned to employment over the month interval in the industries surveyed and that weekly pay rolls were \$5,400,000 greater than in the preceding month. These gains continued the virtually unbroken succession of monthly increases which have been reported since the earlier months of 1936.

Comparisons of employment and pay rolls in these combined industries in May 1937 with May 1936 show an increase of more than 1,480,000 workers over the year interval, and a gain of over \$70,100,000 in weekly pay rolls.

Class I railroads also reported more employees in May than in April, according to a preliminary report of the Interstate Commerce Commission. In April they employed 1,118,728 workers exclusive of executives, officials, and staff assistants, while the number on their pay rolls in May was 1,141,486, a gain of 22,758.

Employment in the executive, legislative, and military services of the Federal Government in May was somewhat higher than in April. A small decrease occurred in the judicial service. On construction projects financed wholly or partially from public funds, increases were reported in employment on projects financed by the Public Works Administration, from regular governmental appropriations, and on Federal projects under The Works Program. When employment on projects operated by the Works Progress Administration during the calendar month of May was compared with similar data for April, a decrease was shown in the number employed. Due to the completion of bridge projects and the suspension of work on reclamation projects employment on projects financed by the Reconstruction Finance Corporation decreased. The number of workers employed on the emergency conservation program decreased during the month.

Industrial and Business Employment

The combined reports received from manufacturing establishments, employing approximately 55 percent of the total number of factory

wage earners of the country, showed an increase of 0.2 percent in employment from April to May and a gain of 0.3 percent in weekly pay rolls. These gains, while slight, are noteworthy as factory employment has increased in May in only 6 of the preceding 18 years for which data are available and pay rolls have increased in only 9 instances.

The factory employment index for May (102.3) was at the highest level registered in any month since November 1929 and indicated a gain of 13.9 percent or more than 1,000,000 workers over May of last year. The corresponding pay-roll index (105.2) was above the level of any month since October 1929 and was 30.2 percent above the May 1936 level, indicating an increase of more than \$49,500,000 in weekly pay rolls over the year interval. The 3-year average, 1923-25, is taken as 100 in computing indexes for the manufacturing industries.

Forty-eight of the 89 manufacturing industries covered reported gains in employment and 47 showed increased pay rolls, but the majority of these industries were in the durable goods group. Employment in this group rose 1.3 percent to 99.9, the highest level of any month since November 1929. Compared with May 1936, employment in the durable goods group showed an increase of 18.9 percent.

On the other hand, employment in the nondurable goods group decreased 1.0 percent over the month interval, due largely to seasonal recessions in the textile and leather groups, but it showed a gain of 9.2 percent over May of last year.

More than 225,000 factory wage earners in the reporting establishments received wage-rate increases in May. Combined with the wage-rate increases reported since October of last year, the cumulative total of employees receiving wage-rate increases reached 3,404,000. This number includes a certain duplication of workers where more than one wage-rate increase has been reported by an establishment over this interval. As the Bureau's monthly survey covers approximately 55 percent of the total number of factory wage earners of the country, the number of employees receiving wage-rate increases as shown by these monthly totals does not represent the total number receiving wage-rate increases in the factories of the country.

A seasonal increase of 18.5 percent in employment was shown in the ice-cream industry. Firms manufacturing rubber tires and tubes reported a gain of 15.1 percent, due primarily to the resumption of operations after the settlement of labor difficulties. Seasonal gains ranging from 2.6 to 6.1 percent were shown in the brick-tile-terra cotta, beet-sugar, tin-can, marble-slate-granite, beverage, and butter industries. Other industries reporting substantial gains in employment over the month interval were electric- and steam-railroad car-building (3.5 percent), engines-turbines-tractors (3.1 percent), copper, lead, and zinc smelting and refining (3.4 percent), electrical machinery,

apparatus, and supplies (2.8 percent), and automobiles (2.8 percent). Gains were noted in a number of industries manufacturing building materials and supplies. In addition to the increases mentioned above in the brick-tile-terra cotta and marble-slate-granite industries, gains were shown in cement (2.4 percent), sawmills (2.3 percent), structural metalwork (1.5 percent), paints and varnishes (1.4 percent), plumbers' supplies (1.4 percent), and glass (1.2 percent). The blast-furnace, steel-works, and rolling-mill industry showed a gain of 1.4 percent in employment. Other industries of major importance in which gains were noted were foundries and machine shops (1.9 percent), petroleum refining (1.7 percent), baking (1.4 percent), chemicals (1.4 percent), slaughtering and meat packing (1.1 percent), paper and pulp (0.9 percent), and book and job printing (0.4 percent).

The most pronounced decreases in employment from April to May were seasonal in character. The fertilizer industry reported a decline of 31.0 percent; cottonseed oil-cake-meal, 18.6 percent; canning and preserving, 10.1 percent; confectionery, 4.1 percent; and boots and shoes, 4.0 percent. Radios and phonographs showed a decline of 11.7 percent, due primarily to strikes, and each of the 14 industries comprising the textile group also reported declines. The textile industries showing seasonal recessions were millinery, 8.3 percent; women's clothing, 5.7 percent; shirts and collars, 5.1 percent; and men's clothing, 2.8 percent. Employment in silk and rayon goods mills decreased 4.2 percent over the month interval and the woolen and worsted goods and the knit goods industries reported declines of 1.2 percent and 1.4 percent respectively.

Increases in employment reported in 12 of the 16 nonmanufacturing industries surveyed more than offset the losses reported in the remaining 4 industries and resulted in a net gain of approximately 83,000 workers in the group of nonmanufacturing industries.

Seasonal gains in employment were reported in private building construction (7.7 percent), dyeing and cleaning (4.4 percent), quarrying and nonmetallic mining (3.5 percent), and laundries (2.0 percent). A substantial increase was reported in bituminous-coal mining (7.1 percent), partially offsetting the sharp decline registered in the preceding month. Employment in metal mines showed a further expansion (2.7 percent), continuing the practically unbroken succession of gains which have been reported each month since July 1935. Employment in this industry was 28.6 percent above the May 1936 level and 174.0 percent above the low point of August 1932.

Electric light and power and manufactured gas companies reported a gain of 1.6 percent in employment. This increase raised the May employment index (94.4) above the maximum recorded in any month since September 1931. Telephone and telegraph companies and electric railroad and motor-bus operation companies reported gains in

employment of 1.5 percent and 0.5 percent respectively. Crude-petroleum producing companies also reported larger working forces, employment increasing 1.0 percent. Insurance firms reported a gain of 0.5 percent.

Wholesale-trade establishments reported a decrease of 1.2 percent or 17,700 fewer employees than in the preceding month. The decline was due largely to a seasonal slackening in the farm products and assemblers and country buyers groups. Wholesale dry goods and apparel firms reported a decrease of 0.9 percent in employment. Among the several lines of wholesale trade reporting gains over the month interval were chemicals and drugs, electrical goods, foods, hardware, machinery equipment and supplies, paper and paper products, and wholesale groceries.

A further gain in employment was reported in retail-trade establishments, the increase of 1.0 percent indicating the employment of 35,000 additional workers. Increases were reported in many lines of retail distribution. In the important group of department, variety, and general-merchandising stores and mail-order houses employment increased 2.0 percent. Retail hardware stores reported a gain of 2.8 percent in number of workers, lumber and building material firms a gain of 1.6 percent, furniture stores a gain of 1.4 percent, automotive establishments a gain of 1.5 percent, and apparel stores, an increase of 0.8 percent. Declines in employment were shown in retail coal-wood-ice and jewelry, while retail food showed virtually no change, an increase of less than one-tenth of 1 percent.

Employment by class I railroads increased in May, according to preliminary reports of the Interstate Commerce Commission. The number of railroad workers exclusive of executives, officials, and staff assistants was 1,141,486 in May as against 1,118,728 in April, a gain of 22,758 or 2.0 percent. Pay-roll figures were not available at the time this report was prepared. In April, however, total wage disbursements to this group of workers were \$158,087,384 in comparison with \$161,551,803 for March, a decrease of 2.1 percent over the month interval.

Hours and earnings.—Based on data supplied by cooperating manufacturing establishments for full- and part-time workers combined, average hours worked per week by factory wage earners were 39.8 in May as compared with 40.4 in April, a decrease of 1.4 percent over the month interval. The hourly earnings for May, however, were 64.9 cents as compared with 63.8 cents for April, an increase of 1.7 percent. Average weekly earnings of factory wage earners rose 0.1 percent over the month interval to \$26.39.

Of the 14 nonmanufacturing industries for which man-hour data are available, 8 reported gains in average hours worked per week and all showed increases in average hourly earnings. Higher average weekly earnings were reported by 14 of the 16 nonmanufacturing industries surveyed.

Table 1 presents a summary of employment and pay-roll indexes and average weekly earnings in May 1937 for all manufacturing industries combined, for selected nonmanufacturing industries, and for class I railroads, with percentage changes over the month and year intervals except in the few industries for which certain items cannot be computed. The indexes of employment and pay rolls for the manufacturing industries are based on the 3-year average, 1923-25, as 100, and for the nonmanufacturing industries on the 12-month average of 1929 as 100. The information for the manufacturing industries, mining, laundries, dyeing and cleaning, and building construction covers wage earners only. For crude-petroleum producing it covers wage earners and clerical field force. The figures for public utilities, trade, hotels, brokerage, and insurance cover all employees, including executives.

TABLE 1.—Employment, Pay Rolls, and Earnings in All Manufacturing Industries Combined and in Nonmanufacturing Industries, May 1937 (Preliminary Figures)

Industry	Employment			Pay roll			Average weekly earnings		
	Index May 1937	Percentage change from—		Index May 1937	Percentage change from—		Average in May 1937	Percentage change from—	
		April 1937	May 1936		April 1937	May 1936		April 1937	May 1936
All manufacturing industries combined ¹	(1923-25 = 100)			(1923-25 = 100)					
Class I steam railroads ²	102.3	+0.2	+13.9	105.2	+0.3	+30.2	\$26.39	+0.1	+14.2
Coal mining:				(1929 = 100)					
Anthracite.....	51.0	-5.5	-7.0	44.4	-30.5	-21.1	25.32	-26.4	-15.1
Bituminous.....	77.8	+7.1	+2.0	67.8	+24.7	+9.0	22.20	+16.4	+6.8
Metaliferous mining.....	78.2	+2.7	+28.6	79.6	+3.6	+67.1	32.28	+.9	+29.9
Quarrying and nonmetallic mining.....	54.9	+3.5	+5.5	51.4	+6.9	+21.9	23.44	+3.3	+15.5
Crude-petroleum producing.....	76.5	+1.0	+5.2	68.2	+1.1	+17.6	33.21	+.1	+11.7
Public utilities:									
Telephone and telegraph.....	77.7	+1.5	+8.6	89.2	+3.7	+13.6	30.86	+2.1	+4.6
Electric light and power and manufactured gas.....	94.4	+1.6	+6.0	97.6	+2.4	+12.1	33.34	+.8	+5.8
Electric-railroad and motor-bus operation and maintenance.....	73.3	+.5	+2.4	70.1	+1.0	+6.0	31.44	+.5	+3.5
Trade:									
Wholesale.....	90.8	-1.2	+7.3	76.1	+.9	+11.6	30.29	+2.2	+4.0
Retail.....	89.7	+1.0	+5.5	73.2	+1.9	+11.2	22.18	+.9	+5.4
General merchandising.....	101.6	+2.0	+6.4	91.3	+2.6	+12.9	19.41	+.6	+6.1
Other than general merchandising.....	86.6	+.6	+5.3	69.5	+1.8	+10.9	24.32	+1.1	+5.4
Hotels (year-round) ⁴	87.7	-.8	+4.2	73.6	-1.2	+9.9	14.59	-.5	+5.5
Laundries.....	90.3	+2.0	+5.6	81.4	+3.6	+7.6	16.94	+1.6	+1.9
Dyeing and cleaning.....	88.6	+4.4	+1.6	73.9	+7.4	+2.4	20.61	+2.9	+.8
Brokerage.....	(3)	-1.4	+5.0	(3)	-1.1	+9.7	39.42	+.3	+4.4
Insurance.....	(3)	+.5	+1.4	(3)	+1.0	+6.0	39.50	+.5	+4.5
Building construction.....	(3)	+7.7	+11.8	(3)	+13.2	+29.1	31.10	+5.1	+15.6

¹ Revised indexes; adjusted to 1933 Census of Manufactures.

² Preliminary; source—Interstate Commerce Commission.

³ Not available.

⁴ Cash payments only; the additional value of board, room, and tips cannot be computed.

Public Employment

On construction projects financed from Public Works Administration funds 206,000 workers were employed during May, an increase of

14,000 compared with the preceding month. Employment gains were reported on Federal projects financed from funds provided by the National Industrial Recovery Act and on projects financed from funds provided by the Emergency Relief Appropriation Acts of 1935 and 1936. A slight decrease in the number employed occurred on non-Federal projects financed from the National Industrial Recovery Act. During May pay-roll disbursements from Public Works Administration funds totaled in excess of \$15,850,000.

A substantial increase was reported in the number of employees working on construction projects financed from regular governmental appropriations. In May more than 160,000 workers were employed, a gain of 20.9 percent compared with April. Employment increases were registered for all types of projects with the exception of building construction and water and sewerage projects. There was a small decrease in the number of employees working on building construction projects and employment on water and sewerage projects showed no change. Monthly pay-roll disbursements advanced from \$13,856,000 in April to over \$15,278,000 in May.

The level of employment on projects financed by the Reconstruction Finance Corporation decreased sharply during May. Compared with more than 8,000 workers employed in the preceding month, approximately 6,000 were employed. This was a decrease of 28.9 percent. Inasmuch as all bridges under construction were completed, no workers were engaged on this type of project. Moreover, a suspension of work on reclamation projects occurred during the month. Employment on building construction, water and sewerage, and miscellaneous projects decreased. Pay-roll disbursements on all projects financed by the Reconstruction Finance Corporation amounted to \$790,000, a decrease of 24.1 percent.

The number of wage earners employed on projects financed by The Works Program was 3,019,000. For the first time employment and pay-roll data on projects operated by the Works Progress Administration were shown on a calendar monthly basis. Prior to May 1937 statistics on this part of The Works Program were presented on a fiscal monthly basis. Of the total number employed in May on projects financed by The Works Program 267,000 were working on Federal projects; 2,149,000 on that part of the program operated by the Works Progress Administration; and 603,000 on National Youth Administration work projects and Student-Aid. Total pay-roll disbursements for the month amounted to \$132,561,000.

In the regular agencies of the Federal Government, increases were reported for the executive, legislative, and military services. A decrease, on the other hand, occurred in the judicial service. The increase in the level of employment for the executive service was less than 1 percent in May as compared with April, but was 3.0 percent

higher than in May a year ago. Of the 840,000 employees in the executive service in May 116,000 were working in the District of Columbia and 724,000 were employed outside the District. The most pronounced increases in the number of workers in the executive departments of the Federal Government occurred in the War Department and the Department of the Interior. Among the agencies reporting decreases were the Federal Emergency Administration of Public Works and the Panama Canal.

Employment on emergency conservation work (Civilian Conservation Corps) totaled 349,000 in May. Compared with the preceding month, this was a decrease of 20,000. Small increases in the number of educational advisers and supervisory and technical workers were offset by decreases in enrolled personnel and in the number of reserve officers. Pay rolls during the month for all groups of workers amounted to \$16,719,000.

In May 176,000 workers were employed on the construction and maintenance of State roads. This was an increase of 38,000 or 27.9 percent compared with April. Employment was greater on State road construction and maintenance than in any month since November 1936. Of the total number employed 17,000 or 9.8 percent were engaged on new-road construction and 159,000 or 90.2 percent on maintenance work. Pay-roll disbursements also showed a marked gained, increasing from \$9,108,000 in April to \$10,850,000 in May.

A summary of Federal employment and pay-roll statistics for April and May is given in table 2.

TABLE 2.—*Summary of Federal Employment and Pay Rolls, May 1937¹*
(Preliminary Figures)

Class	Employment		Per-cent-age change	Pay roll		Per-cent-age change
	May 1937	April 1937		May 1937	April 1937	
Federal service:						
Executive ²	840,521	835,639	+0.6	\$127,998,772	\$128,237,028	-0.2
Judicial.....	2,010	2,018	-4	496,663	505,102	-1.7
Legislative.....	5,117	5,107	+2	1,197,996	1,194,543	+3
Military.....	317,520	317,001	+2	23,813,274	24,920,522	-4.4
Construction projects:						
Financed by P. W. A. ³	206,019	192,201	+7.2	15,850,554	15,242,300	+4.0
Financed by R. F. C. ⁴	5,847	8,226	-28.9	790,018	1,041,280	-24.1
Financed by regular govern- mental appropriations.....	160,346	132,639	+20.9	15,278,529	13,855,633	+10.3
Federal projects under The Works Program.....						
Projects operated by W. P. A.....	2,149,288	2,100,965	+2.3	111,720,096	115,802,897	-3.5
National Youth Administration:						
Work projects.....	184,173	191,982	-4.1	3,093,750	3,181,627	-2.8
Student-Aid.....	418,362	434,744	-3.8	3,591,961	3,302,100	+8.8
Relief work: Emergency conserva- tion work ⁵	348,905	369,309	-5.5	16,719,019	17,502,905	-4.5

¹ Includes data on projects financed wholly or partially from Federal funds.

² Includes employees of Columbia Institution for the Deaf and Howard University.

³ Includes 2 employees by transfer previously re-
ported as separations, not actual additions for May.

⁴ Revised.

⁵ Data covering P. W. A. projects financed from E. R. A. A. 1935 and 1936 funds are included. These data are not shown under The Works Program. Includes 139,561 wage earners and \$10,339,137 pay roll for May; 129,887 wage earners and \$9,618,255 pay

roll for April covering P. W. A. projects financed from E. R. A. A. 1935 and 1936 funds.

⁶ Includes 80 employees and pay-roll disburse-
ments of \$4,420 for May and 77 employees and pay
roll of \$4,235 for April on projects financed by the
RFC Mortgage Co.

⁷ These data, formerly presented on a fiscal
monthly basis, are for the calendar month.

⁸ Includes 41,930 employees and pay roll of \$5,370,-
053 for May and 40,617 employees and pay roll of
\$5,449,798 for April included in executive service.

DETAILED REPORTS FOR INDUSTRIAL AND BUSINESS EMPLOYMENT, APRIL 1937

THIS ARTICLE presents the detailed figures on volume of employment, as compiled by the Bureau of Labor Statistics, for the month of April 1937. The tabular data are the same as those published in the Employment and Pay Rolls pamphlet for April, except for certain minor revisions and corrections.

Monthly reports on employment and pay rolls in industrial and business industries are now available for the following groups: 89 manufacturing industries; 16 nonmanufacturing industries, including building construction; and class I steam railroads. The reports for the first two of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics, and in virtually all industries the samples are large enough to be entirely representative. The figures on class I steam railroads are compiled by the Interstate Commerce Commission and are presented in the foregoing summary.

Employment, Pay Rolls, Hours, and Earnings

The indexes of employment and pay rolls, average hours worked per week, average hourly earnings, and average weekly earnings in manufacturing and nonmanufacturing industries in April 1937 are shown in table 1. Percentage changes from March 1937 and April 1936 are also given.

Table 1.—Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries, April 1937

MANUFACTURING

[Indexes are based on 3-year average 1923-25=100 and are adjusted to 1933 Census of Manufactures]

Industry	Employment		Pay rolls		Average weekly earnings ¹		Average hours worked per week ¹		Average hourly earnings ¹	
	Percentage change from—		Index April 1937		Percentage change from—		Percentage change from—		Percentage change from—	
	Index April 1937	March 1937	April 1936	March 1937	April 1937	March 1937	April 1936	March 1937	April 1936	April 1937
All manufacturing industries.....	102.1	+1.0	+14.6	104.9	+3.8	+39.3	\$26.30	+2.7	+15.4	40.4
Durable goods.....	98.6	+2.3	+19.8	106.4	+6.4	+40.0	29.98	+4.1	+16.9	42.0
Nondurable goods.....	105.9	-1.2	+10.0	102.9	+3.3	+23.2	22.15	+5.6	+12.1	38.6
<i>Durable goods</i>										
Iron and steel and their products, not including machinery.....	108.9	+2.0	+24.0	124.5	+10.6	+56.2	\$32.60	+8.4	+25.9	42.6
Blast furnaces, steel works, and rolling mills.....	120.2	+2.7	+25.9	145.6	+14.5	+63.4	36.20	+11.6	+29.8	42.6
Bolts, nuts, washers, and rivets.....	93.2	+3.3	+26.7	116.0	+7.2	+48.3	28.76	+3.8	+17.1	43.3
Cast-iron pipe.....	70.9	+2.7	+17.3	61.5	+10.9	+51.5	23.28	+7.9	+29.1	41.8
Cutlery (not including silver and plated cutlery) and edge tools.....	89.7	+1.4	+16.1	86.1	+2.5	+30.4	24.21	+2.0	+12.3	42.6
Forgings, iron and steel.....	74.0	+1.8	+30.8	75.5	+4.7	+55.3	31.29	+2.9	+19.5	44.4
Hardware.....	99.8	-1.3	+27.8	114.1	-2.1	+48.7	25.79	-1.9	+16.3	42.4
Plumbers' supplies.....	94.6	-1.2	+12.5	77.5	-3.7	+33.1	25.41	-2.5	+18.4	41.5
Steam and hot-water heating apparatus and steam fittings.....	81.7	+2.5	+30.3	84.5	+7.5	+68.3	29.91	+4.9	+29.0	44.0
Stoves.....	115.2	+2.0	+16.8	100.4	+3.9	+33.5	27.09	+1.9	+14.2	42.5
Structural and ornamental metalwork.....	75.7	+2.1	+24.7	78.5	+8.7	+54.8	29.17	+6.4	+24.3	42.7
Tin cans and other tinware.....	102.2	+2.0	+8.6	108.2	+3.9	+19.4	23.53	+1.8	+9.8	40.6
Tools (not including edge tools, machine tools, files, and saws).....	102.2	+.3	+30.0	115.5	+4.1	+45.9	26.44	+3.8	+12.3	45.2
Wirework.....	186.0	-.3	+26.9	184.2	+2.2	+34.1	25.20	+2.5	+7.6	39.2
Machinery, not including transportation equipment.....	124.3	+2.6	+24.8	133.9	+6.7	+46.8	29.75	+4.1	+17.6	43.0
Agricultural implements.....	137.5	+4.6	+4.9	180.0	+11.0	+23.4	20.23	+6.2	+18.3	41.5
Cash registers, adding machines, and calculating machines.....	131.3	+.6	+11.7	148.0	+5.4	+33.8	34.77	+4.8	+19.7	43.5
Electrical machinery, apparatus, and supplies.....	114.6	+3.1	+34.0	121.0	+7.9	+54.5	29.16	+4.7	+15.4	41.2
Engines, turbines, tractors, and water wheels.....	144.3	+3.2	+14.5	152.6	+9.6	+38.4	33.05	+6.2	+22.0	41.2
Foundry and machine-shop products.....	146.7	+2.7	+20.5	118.5	+6.2	+49.2	30.99	+3.4	+18.0	44.7
Machine tools.....	146.7	+2.7	+30.9	169.1	+4.2	+55.3	33.43	+1.5	+18.0	46.9

Electrical machinery, apparatus, and supplies.	+14.6	+3.1	+34.0	121.0	+7.9	+13.4	29.16	+38.4	+12.0	+4.2	+4.3	+4.3	+11.1
Engines, turbines, tractors, and water wheels.	144.3	+3.2	+34.0	152.6	+9.6	+13.4	33.05	+22.0	+41.2	-4.2	-4.3	-4.3	+17.3
Foundry and machine-shop products.	146.7	+2.7	+30.9	159.1	+7.0	+12.8	33.43	+18.6	+46.9	+1.2	+6.7	+6.7	+12.5
Machine tools.	158.4	+2.8	+1.7	126.8	+7.0	+12.4	45.3	+18.6	+46.9	+1.3	+2.0	+2.0	+5.9
Radios and phonographs.	87.0	+2.5	+23.9	95.8	+5.0	+10.5	36.8	+10.5	+42.9	+1.5	+3.9	+3.9	+11.3
Textile machinery and parts.	154.3	+1.0	+36.2	156.7	+2.3	+10.4	45.3	+17.5	+43.6	+1.6	+4.1	+4.1	+14.5
Typewriters and parts.	125.4	+8.6	+19.5	128.6	+4.0	+28.7	42.9	+17.5	+21.4	+1.7	+2.6	+2.6	+14.5
Aircraft.	813.7	+2.9	+49.6	738.7	+5.0	+67.2	28.45	+2.1	+7.8	+1.5	+5.5	+5.5	+14.5
Automobiles.	136.2	+3.5	+17.8	136.0	+2.9	+24.7	33.09	+7.5	+5.9	+1.2	+6.9	+6.9	+11.7
Cars, electric- and steam-railroad.	75.1	+6.9	+36.6	81.0	+12.7	+70.1	29.83	+5.4	+25.4	+1.3	+9.0	+9.0	+11.1
Locomotives.	57.4	+5.9	+98.1	45.1	+10.1	+15.1	30.56	+4.6	+26.9	+0.6	+15.6	+15.6	+9.7
Shipbuilding.	109.0	+2.0	+6.8	122.7	+5.7	+20.1	31.17	+3.6	+12.4	+1.4	+4.0	+4.0	+8.5
Railroad repair shops.	63.3	+1.8	+9.5	67.4	+2.4	+15.0	30.50	+5.0	+4.5	+1.4	+4.8	+4.8	+1.9
Electric railroad.	63.8	+1.4	+2.1	67.6	+7.7	+8.1	29.94	+1.1	+5.9	+1.5	+1.5	+1.5	+6.0
Steam railroad.	63.8	+1.4	+10.2	67.6	+2.6	+15.7	30.69	+1.8	+5.0	+1.8	+5.2	+5.2	+16.8
Nonferrous metals and their products.	115.5	+1.8	+22.4	114.2	+2.1	+48.6	26.60	+1.3	+20.0	+1.9	+5.6	+5.6	+18.8
Aluminum manufactures.	124.4	+2.2	+20.6	130.7	+3.3	+42.4	26.38	+1.7	+18.1	+2.5	+5.3	+5.3	+12.7
Brass, bronze, and copper products.	127.6	+2.8	+29.3	132.7	+3.9	+63.6	29.43	+1.0	+26.5	+1.6	+7.6	+7.6	+17.6
Clocks and watches and time-recording devices.	123.0	+1.8	+19.3	122.1	+1.6	+38.3	23.23	+8.8	+15.9	+1.7	+7.7	+7.7	+8.6
Jewelry.	87.5	-1.2	+20.2	68.0	-1.8	+37.4	23.58	-6	+14.4	+2.4	+7.4	+7.4	+6.2
Lighting equipment.	101.4	-2.3	+41.8	107.1	-2.0	+68.5	26.52	+3	+18.8	+2.5	+5.2	+5.2	+13.4
Silverware and plated ware.	74.4	+1.9	+16.4	68.5	+8.8	+44.1	25.65	-1	+23.7	+1.4	+8.8	+8.8	+7.7
Smelting and refining—copper, lead, and zinc.	84.6	+4.3	+10.1	81.9	+8.9	+36.6	28.40	+4.5	+24.1	+2.5	+3.4	+3.4	+20.0
Stamped and enameled ware.	162.4	-1.7	+16.7	164.1	+5.5	+28.8	23.49	+2.3	+10.4	+1.2	+5.6	+5.6	+12.8
Furniture.	70.6	+1.1	+12.4	68.3	+5.7	+30.6	21.64	+4.4	+16.1	+1.2	+5.7	+5.7	+12.8
Lumber.	86.9	-0.7	+21.9	78.5	+2.0	+41.2	21.21	+2.8	+15.8	+0.4	+4.7	+4.7	+9.7
Millwork.	57.7	+1.8	+23.7	55.6	+5.6	+40.7	22.46	+3.8	+13.7	+1.4	+7.7	+7.7	+5.5
Sawmills.	53.4	+2.2	+5.6	52.0	+8.5	+21.3	21.71	+6.2	+14.9	+1.3	+4.1	+4.1	+9.1
Stone, clay, and glass products.	73.0	+3.8	+15.9	71.1	+7.6	+35.7	24.80	+3.6	+17.1	+0.7	+5.9	+5.9	+11.0
Brick, tile, and terra cotta.	53.3	+8.0	+24.0	49.2	+15.5	+52.3	22.53	+6.9	+23.0	+3.4	+6.2	+6.2	+16.5
Cement.	66.9	+5.3	+21.9	68.5	+9.6	+44.8	25.48	+4.1	+18.7	+1.8	+5.1	+5.1	+13.1
Glass.	110.9	+1.8	+12.0	120.2	+4.4	+32.6	26.18	+3.6	+18.2	+1.9	+5.2	+5.2	+12.8
Marble, granite, slate, and other products.	43.1	+6.7	+13.4	38.8	+15.6	+21.9	26.30	+8.3	+7.5	+6.3	+4.8	+4.8	+2.6
Pottery.	82.1	+1.2	+9.7	+72.2	-2.3	+22.1	23.42	-3.5	+11.3	-3.6	+4.7	+4.7	+4.3
Nondurable goods													
Textiles and their products.	109.9	-1.2	+10.5	100.2	+2.9	+29.2	18.34	-1.7	+11.6	-3.4	+4.8	+4.8	+6.1
Fabrics.	103.7	-1.1	+13.1	100.3	+2.9	+29.9	18.27	+3.0	+14.8	37.0	-3.4	-3.4	+9.5
Carpets and rugs.	102.9	+1.6	+25.0	101.5	-1.4	+51.8	23.25	+1.9	+21.5	-7.1	+1.9	+1.9	+5.1
Cotton goods.	103.7	+1.6	+19.1	107.6	+6.1	+43.6	16.11	+5.5	+20.5	-7.4	+4.7	+4.7	+9.8
Cotton small wares.	107.9	-0.6	+13.2	108.3	-0.9	+21.4	18.75	-3	+7.4	-3.0	+2.6	+2.6	+14.9
Dyeing and finishing textiles.	123.1	-0.7	+3.2	114.6	+1.8	+13.6	22.30	+1.8	+10.0	-2.1	+2.2	+2.2	+6.5
Hats, fur-felt.	88.0	-3.1	+2.7	65.9	+2.6	+2.7	20.38	-2.1	+6.6	-25.8	-4.1	-4.1	+4.0
Knit goods.	123.4	-2	+7.4	127.5	+15.4	+17.93	+1.6	+7.5	+7.5	-2.2	+4.5	+4.5	+3.0
Silk and rayon goods.	82.2	-0.6	+8.2	71.3	+1.8	+21.0	16.76	+1.4	+11.8	-9.9	+6.5	+6.5	+2.5
Woolen and worsted goods.	89.0	-1.4	+11.7	83.3	+5.4	+36.3	21.57	+6.9	+21.9	-4.4	+7.5	+7.5	+14.4
Wearing apparel.	121.8	-2.9	+5.9	95.7	-13.3	+11.0	18.53	-0.7	+10.7	-6.6	+4.5	+4.5	+1.5
Clothing, men's.	114.8	-1.3	+8.1	95.4	-9.4	+24.8	19.94	-8.2	+15.5	-6.3	+1.5	+1.5	+3.1
Clothing, women's.	161.8	-4.8	+1.5	112.6	-18.3	-1.2	-1.2	-1.7	-14.3	-1.7	-1.7	-1.7	-6.5

TABLE I.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries, April 1937*—Continued

MANUFACTURING—Continued

[Indexes are based on 3-year average 1923-25 = 100 and are adjusted to 1933 Census of Manufactures]

Industry	Employment		Pay rolls		Average weekly earnings ¹		Average hours worked per week ¹		Average hourly earnings ¹		Percentage change from— April 1937	
	Percentage change from— Index April 1937		Percentage change from— Index April 1937		April 1937		April 1936		April 1937			
	March 1937	April 1936	March 1937	April 1936	March 1937	April 1936	March 1937	April 1936	March 1937	April 1936		
Nondurable goods—Continued												
Textiles and their products—Continued.												
Wearing apparel—Continued.												
Corsets and allied garments.	-0.8	+2.7	96.0	+6.5	\$17.03	-1.5	+3.5	-4.4	+2.7	+3.0	+2.4	
Men's furnishings.	-0.5	+18.1	115.7	+24.4	13.90	-5.4	+5.5	-3.1	-1.5	-0.7	-1.	
Millinery.	-8.7	-1.7	48.6	-4.6	22.26	-17.6	+2.6	-3.8	-3.1	33.3		
Shirts and collars.	-12.6	+11.6	114.6	+14.0	13.56	-2.7	+19.0	-3.8	-4.4	36.0	+2.4	
Leather and its manufactures.	98.3	-2.6	87.7	-5.1	20.82	-6.0	+20.9	38.9	-5.0	+14.9	+4.5	
Boots and shoes.	-3.3	+8.9	81.6	-8.3	+31.7	19.82	+5.2	+20.9	38.5	+2.6	+5.1	
Leather.	100.0	+1.2	61.1	+11.4	+24.1	24.76	+2.6	+17.0	+17.0	51.8	+4.5	
Food and kindred products.	107.7	+1.9	7.4	+3.8	108.2	+2.0	+2.0	+17.0	40.6	-6.6	+7.6	
Baking.	132.7	-7	+5.5	+13.3	24.28	+2.2	+2.2	+17.4	42.3	-1.4	+4.2	
Beverages.	196.7	+2.2	+11.4	+22.0	+4.3	+18.0	+3.04	+2.1	+7.4	-1.7	+9.5	
Butter.	83.9	+3.3	66.2	+2.8	+7.3	+2.8	+2.8	+5.9	41.3	+1.4	+3.2	
Canning and preserving.	110.8	+23.7	+17.6	+26.6	+40.3	16.49	+2.3	+19.2	36.4	-2.9	+13.2	
Confectionery.	74.2	-5.8	+3.5	70.5	-7.5	+14.5	-1.6	+1.8	+10.0	+2.0	+3.2	
Flour.	74.4	+3.3	+7	72.3	+2.7	+10.8	24.75	+2.4	+10.0	44.3	+6.6	
Ice cream.	69.2	+7.2	+3.0	64.4	+8.3	+10.4	+28.36	+1.1	+7.2	+1.0	+3.6	
Slaughtering and meat packing.	88.4	-2.6	7.5	98.7	+7.8	+32.3	27.98	+10.7	+23.0	48.9	+4.8	
Sugar, beet.	44.0	+13.3	+9.3	50.3	+12.2	+19.3	25.96	-1.0	+9.0	-1.1	+1.8	
Sugar refining, cane.	83.7	+9.9	+3.4	80.5	-2	+17.6	25.83	-9.1	+13.8	-7.8	+6.4	
Tobacco manufactures.	60.9	-1.0	+2.7	52.9	-2	+18.9	16.05	+1.8	+15.7	36.7	+1.5	
Cheewing and smoking tobacco and snuff.	56.0	-1.7	+5.5	65.7	+4	+15.1	17.50	+2.0	+14.5	36.3	-2.4	
Cigars and cigarettes.	60.6	-1.1	+3.0	50.7	-2	+19.5	16.73	+1.0	+16.4	36.8	+1.4	
Paper and printing.	107.2	+1.1	+8.2	104.8	+1.7	+16.7	17.9	+1.6	+16.7	40.8	-2.7	
Boxes, paper.	104.0	+1.3	+14.5	107.9	+1.1	+27.1	21.10	+1.9	+11.1	42.2	-2.3	
Paper and pulp.	119.1	+1.3	+9.5	119.6	+2.7	+25.2	25.29	+1.4	+14.4	43.4	-6.6	
Printing and publishing:												
Book and job printing.	96.9	-1.2	+10.0	93.4	-7.9	+17.5	30.45	+1.3	+6.8	40.4	-1.	
Newspapers and periodicals.	105.6	+1.1	+2.0	103.7	+4	+7.1	36.70	+1.4	+4.9	40.4	+2.6	

NONMANUFACTURING

[Indexes are based on 12-month average 1929 = 100]

¹ Average weekly earnings are computed from figures furnished by all reporting establishments. Average hours and average hourly earnings are computed from data supplied by a smaller number of establishments as all reporting firms do not furnish man-hours. Percentage changes over year are computed from indexes. Percentage changes over month in average weekly earnings for the manufacturing groups, for all man-

factoring industries combined, and for retail trade are also computed from indexes.

¹Not available.

***Indexes of Employment and Pay Rolls,
January 1936 to April 1937***

Indexes of employment and pay rolls are given in tables 2 and 3 for all manufacturing industries combined, for the durable- and nondurable-goods groups of manufacturing industries separately, and for 13 nonmanufacturing industries including 2 subgroups under retail trade, by months from January 1936 to April 1937, inclusive. The accompanying chart indicates the trend of factory employment and pay rolls from January 1919 to April 1937.

The indexes of factory employment and pay rolls are computed from returns supplied by representative establishments in 89 manufacturing industries and cover only wage earners. The base used in computing these indexes is the 3-year average 1923-25 as 100. In April 1937 reports were received from 25,297 manufacturing establishments employing 4,971,593 workers whose weekly earnings were \$130,777,313. The employment reports received from these establishments cover more than 55 percent of the total wage earners in all manufacturing industries of the country and more than 65 percent of the wage earners in the 89 industries included in the monthly survey of the Bureau of Labor Statistics.

TABLE 2.—Indexes of Employment and Pay Rolls in All Manufacturing Industries Combined and in the Durable and Nondurable Goods Groups, January 1936 to April 1937¹

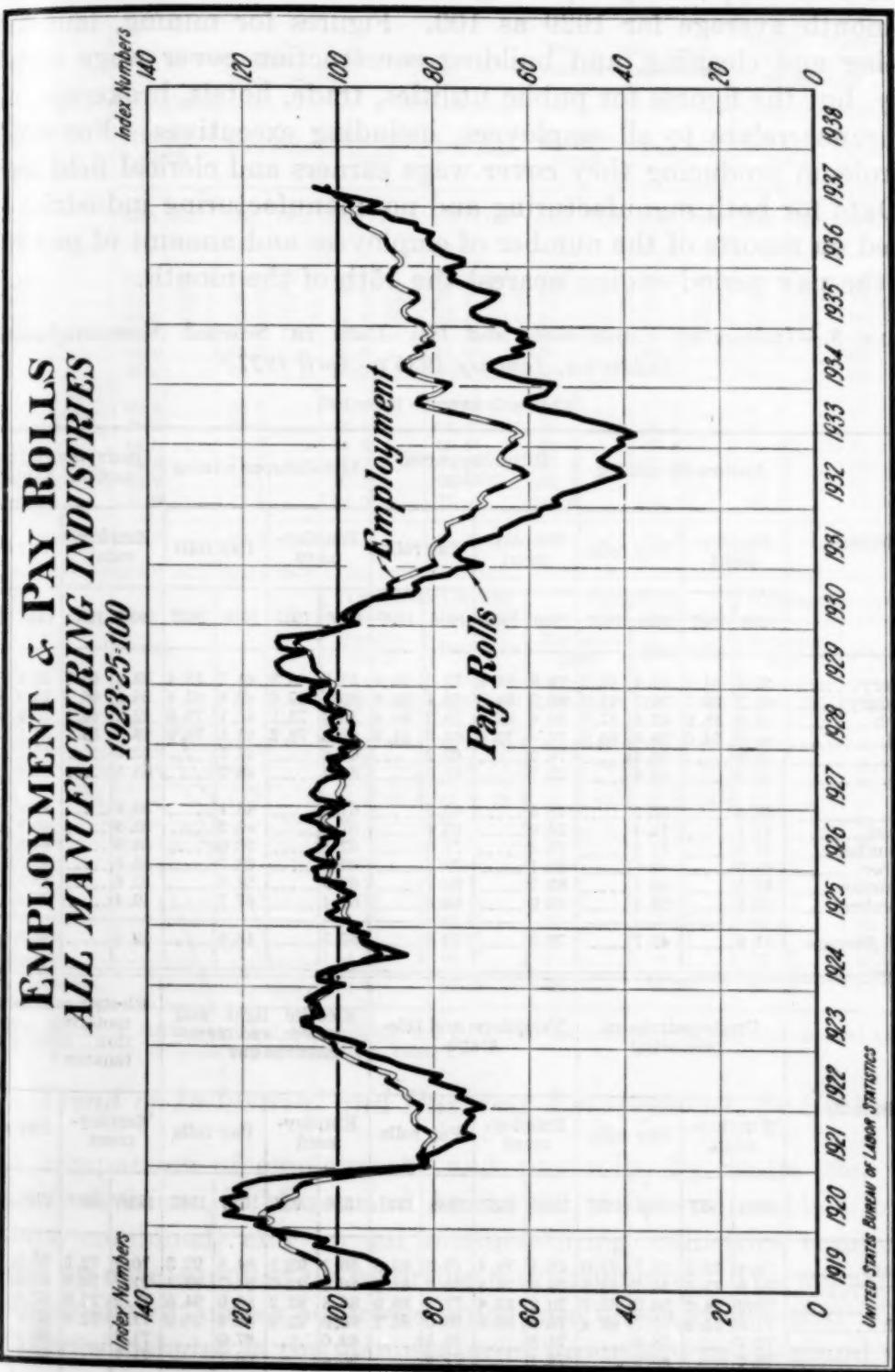
[Adjusted to 1933 Census of Manufacturers—3-year average 1923-25=100]

Month	Manufacturing											
	Total				Durable goods ²				Nondurable goods ³			
	Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
January.....	86.8	96.5	73.8	90.7	78.7	90.4	66.9	86.6	95.4	103.0	82.5	96.0
February.....	86.9	99.0	73.7	95.8	78.6	93.2	66.6	92.5	95.8	105.2	82.7	99.9
March.....	87.9	101.1	77.6	101.1	80.2	96.4	71.8	100.0	96.1	106.1	84.9	102.6
April.....	89.1	102.1	79.3	104.9	82.3	98.6	76.0	106.4	96.3	105.9	83.5	102.9
May.....	89.8	.....	80.8	.....	84.0	.....	78.5	.....	96.0	.....	83.8	.....
June.....	90.1	.....	81.1	.....	84.7	.....	79.0	.....	95.9	.....	83.9	.....
July.....	91.2	.....	80.2	.....	84.6	.....	75.9	.....	98.2	.....	85.6	.....
August.....	93.5	.....	83.5	.....	84.7	.....	77.0	.....	102.8	.....	91.8	.....
September.....	95.5	.....	83.6	.....	85.7	.....	77.2	.....	105.9	.....	91.6	.....
October.....	96.7	.....	89.0	.....	89.2	.....	85.3	.....	104.7	.....	93.7	.....
November.....	96.9	.....	90.7	.....	91.0	.....	88.9	.....	103.3	.....	92.9	.....
December.....	98.1	.....	95.2	.....	92.7	.....	93.4	.....	104.0	.....	97.5	.....
Average.....	91.9	.....	82.4	.....	84.7	.....	78.0	.....	99.5	.....	87.9	.....

¹ Comparable indexes for earlier years will be found in the April 1937 issue of the *Monthly Labor Review*.

² Includes the following groups of manufacturing industries: Iron and steel; machinery; transportation equipment; railroad repair shops; nonferrous metals; lumber and allied products; and stone, clay, and glass products.

³ Includes the following groups of manufacturing industries: Textiles and their products, leather and its manufactures, food and kindred products, tobacco manufactures, paper and printing, chemicals and allied products, products of petroleum and coal, rubber products, and a number of miscellaneous industries not included in other groups.



The indexes for nonmanufacturing industries are also computed from data supplied by reporting establishments, but the base is the 12-month average for 1929 as 100. Figures for mining, laundries, dyeing and cleaning, and building construction cover wage earners only, but the figures for public utilities, trade, hotels, brokerage, and insurance relate to all employees, including executives. For crude-petroleum producing they cover wage earners and clerical field force.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the pay period ending nearest the 15th of the month.

TABLE 3.—Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries, January 1936 to April 1937¹

[12-month average 1929=100]

Month	Anthracite mining				Bituminous-coal mining				Metalliferous mining				Quarrying and non-metallic mining			
	Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
January	59.1	54.1	54.4	42.7	79.8	84.6	70.6	79.9	54.2	66.8	41.7	58.4	39.4	45.7	25.5	34.6
February	61.2	52.7	76.7	41.0	80.2	84.8	78.4	82.4	55.5	69.6	42.8	63.4	36.9	46.7	23.9	37.8
March	52.5	48.9	42.6	37.8	80.4	85.9	70.2	88.4	55.9	73.1	45.1	70.6	42.2	49.1	30.9	41.3
April	49.8	54.0	28.6	63.9	77.5	72.6	62.6	54.4	57.5	76.2	45.5	76.9	48.4	53.1	36.1	48.1
May	54.9	—	56.3	—	76.2	—	62.2	—	60.8	—	47.7	—	52.0	—	42.1	—
June	51.2	—	42.0	—	75.7	—	61.5	—	61.9	—	48.2	—	53.5	—	44.0	—
July	48.4	—	37.2	—	75.5	—	62.6	—	61.3	—	46.1	—	54.4	—	43.9	—
August	41.1	—	31.4	—	76.9	—	65.4	—	61.6	—	48.2	—	55.3	—	46.2	—
September	47.6	—	34.9	—	78.2	—	71.0	—	63.1	—	50.0	—	54.9	—	44.8	—
October	49.9	—	48.5	—	81.1	—	79.2	—	64.2	—	53.7	—	54.6	—	46.2	—
November	51.5	—	40.3	—	82.3	—	80.7	—	62.9	—	54.6	—	52.6	—	43.5	—
December	54.8	—	55.4	—	83.9	—	85.0	—	64.4	—	57.7	—	49.4	—	39.4	—
Average	51.8	—	45.7	—	79.0	—	70.8	—	60.3	—	48.4	—	49.5	—	38.9	—

Month	Crude-petroleum producing				Telephone and telegraph				Electric light and power, and manufactured gas				Electric-railroad and motorbus operation and maintenance ²			
	Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls	
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937
January	71.1	72.7	55.7	61.0	70.1	74.4	75.0	83.8	86.1	92.1	84.8	92.3	70.7	72.5	65.0	68.0
February	70.8	73.5	55.7	63.8	69.9	74.8	76.2	82.3	86.1	92.0	84.7	93.3	71.7	72.5	68.3	68.7
March	70.9	74.2	56.0	63.7	70.2	75.4	77.2	86.9	86.8	92.2	85.9	94.5	71.2	72.6	67.8	69.2
April	71.3	75.8	57.1	67.4	70.8	76.6	76.0	86.1	88.0	92.9	86.2	95.2	71.3	72.9	65.9	69.4
May	72.7	—	58.0	—	71.6	—	78.5	—	89.0	—	87.0	—	71.5	—	66.1	—
June	73.7	—	58.9	—	72.1	—	77.4	—	90.4	—	88.1	—	71.7	—	66.8	—
July	75.4	—	60.4	—	73.1	—	79.9	—	91.7	—	89.8	—	72.4	—	66.5	—
August	75.0	—	59.7	—	73.5	—	81.2	—	93.1	—	89.8	—	72.4	—	66.5	—
September	74.5	—	60.4	—	73.7	—	78.8	—	93.5	—	91.4	—	72.8	—	66.4	—
October	73.6	—	59.6	—	73.8	—	83.1	—	94.0	—	92.7	—	73.1	—	67.7	—
November	73.2	—	60.1	—	73.7	—	81.6	—	93.5	—	91.8	—	73.0	—	69.7	—
December	72.4	—	61.3	—	73.6	—	82.4	—	93.2	—	93.8	—	72.5	—	69.3	—
Average	72.9	—	58.6	—	72.2	—	78.9	—	90.5	—	88.8	—	72.0	—	67.2	—

¹ Comparable indexes for earlier years for all of the Monthly Labor Review. Comparable indexes for year-round hotels, will be found in the September 1935 issue of the Monthly Labor Review.

TABLE 3.—Indexes of Employment and Pay Rolls in Selected Nonmanufacturing Industries, January 1936 to April 1937—Continued

Month	Wholesale trade				Total retail trade				Retail trade—general merchandising				Retail trade—other than general merchandising					
	Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls			
	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937		
January	85.6	90.7	66.6	72.6	80.4	85.4	62.1	68.0	88.2	95.1	76.4	83.8	78.4	82.9	59.1	64.7		
February	85.0	92.0	66.6	74.1	79.7	85.2	61.6	67.9	85.1	93.9	73.9	82.9	78.3	82.9	59.1	64.8		
March	85.6	92.1	69.0	75.0	81.9	88.5	63.5	70.5	90.9	100.3	77.3	87.6	79.5	85.4	60.7	67.0		
April	85.7	91.9	67.9	75.4	85.2	88.8	65.3	71.9	97.4	99.6	81.0	89.1	82.0	86.0	62.1	68.3		
May	84.6	—	68.2	—	85.0	—	65.8	—	95.5	—	80.8	—	82.3	—	62.7	—		
June	84.6	—	68.4	—	85.5	—	66.4	—	96.4	—	81.3	—	82.6	—	63.3	—		
July	85.4	—	69.0	—	83.2	—	65.1	—	90.7	—	77.3	—	81.2	—	62.6	—		
August	86.3	—	69.7	—	82.4	—	64.4	—	89.4	—	76.4	—	80.5	—	61.9	—		
September	88.0	—	70.5	—	86.6	—	66.6	—	98.5	—	82.8	—	83.5	—	63.3	—		
October	89.0	—	71.5	—	88.7	—	68.3	—	103.9	—	87.2	—	84.7	—	64.4	—		
November	89.7	—	73.1	—	90.1	—	70.1	—	109.3	—	91.4	—	85.1	—	65.7	—		
December	91.0	—	72.8	—	99.6	—	75.9	—	143.4	—	116.2	—	88.1	—	67.6	—		
Average	86.7	—	69.4	—	85.7	—	66.3	—	99.1	—	83.5	—	82.2	—	62.7	—		
Year-round hotels																		
Month				Laundries				Dyeing and cleaning										
Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls		Employment		Pay rolls				
1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937	1936	1937			
January	81.9	85.5	64.9	70.4	81.5	88.5	68.3	76.4	71.5	76.8	51.6	55.6	—	—	—	—		
February	82.8	86.4	66.5	72.5	81.2	88.6	67.8	76.3	70.3	76.2	49.0	54.6	—	—	—	—		
March	82.8	86.9	66.0	72.7	82.1	88.7	69.9	77.5	74.7	81.1	56.4	61.7	—	—	—	—		
April	83.2	88.4	66.3	74.5	83.2	88.5	70.9	78.5	81.8	84.9	64.1	68.8	—	—	—	—		
May	84.1	—	67.0	—	85.5	—	75.6	—	87.3	—	72.2	—	—	—	—	—		
June	83.9	—	66.6	—	87.2	—	75.8	—	87.5	—	69.2	—	—	—	—	—		
July	83.3	—	66.0	—	90.5	—	79.0	—	85.5	—	64.8	—	—	—	—	—		
August	83.2	—	66.1	—	89.6	—	76.7	—	83.5	—	63.2	—	—	—	—	—		
September	84.2	—	67.5	—	89.6	—	76.6	—	86.7	—	66.1	—	—	—	—	—		
October	85.4	—	69.6	—	87.6	—	75.3	—	86.5	—	66.7	—	—	—	—	—		
November	84.6	—	69.6	—	87.0	—	74.5	—	81.3	—	60.2	—	—	—	—	—		
December	84.0	—	69.8	—	87.6	—	76.1	—	77.7	—	57.3	—	—	—	—	—		
Average	83.6	—	67.2	—	86.1	—	73.9	—	81.2	—	61.7	—	—	—	—	—		

¹ Not including electric-railroad car building and repairing; see transportation equipment and railroad repair-shop groups, manufacturing industries, table 1.

Trend of Industrial and Business Employment, by States

A comparison of employment and pay rolls, by States and geographic divisions, in March and April 1937, is shown in table 4 for all groups combined, and for all manufacturing industries combined, based on data supplied by reporting establishments. The percentage changes shown, unless otherwise noted, are unweighted—that is, the industries included in the manufacturing group and in the grand total have not been weighted according to their relative importance.

The totals for all manufacturing industries combined include figures for miscellaneous manufacturing industries in addition to the 89 manufacturing industries presented in table 1. The totals for all groups combined include all manufacturing industries and each of the non-manufacturing industries presented in table 3 except building construction.

TABLE 4.—Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1937, by Geographic Divisions and by States

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

Geographic division and State	Total—All groups					Manufacturing				
	Number of establishments	Number on pay roll April 1937	Per-cent-age change from March 1937	Amount of pay roll (1 week) April 1937	Per-cent-age change from March 1937	Number of establishments	Number on pay roll April 1937	Per-cent-age change from March 1937	Amount of pay roll (1 week) April 1937	Per-cent-age change from March 1937
<i>Dollars</i>										
New England	14,008	959,208	+ .8	23,093,295	+3.2	3,495	650,122	+ .4	18,170,031	+3.5
Maine.....	791	50,384	-1.8	1,290,210	+1.1	285	48,763	-3.0	1,034,873	+0.3
New Hampshire.....	594	39,803	+ .6	853,046	+2.2	204	33,069	+1.0	692,216	+3.1
Vermont.....	449	18,985	+2.3	438,230	+6.3	142	12,876	+2.4	298,919	+7.2
Massachusetts.....	8,385	517,049	+1.2	12,459,066	+2.7	1,694	317,293	+ .6	7,524,591	+2.8
Rhode Island.....	1,258	100,487	-1	2,340,820	+6.2	426	81,240	-3.3	1,835,003	+6.6
Connecticut.....	2,531	223,500	+1.0	5,711,923	+3.6	744	186,881	+1.3	4,784,429	+4.0
Middle Atlantic	35,434	2,304,275	+ .2	63,486,848	+2.1	5,223	1,282,614	+ .4	35,042,336	+3.3
New York.....	23,712	1,049,340	- .2	29,538,359	-1.1	2,089	471,106	-2.1	15,174,711	+5
New Jersey.....	4,134	351,680	+ .8	9,370,613	+2.6	828	266,490	+ .9	6,995,755	+4.0
Pennsylvania.....	7,589	904,114	+ .5	24,584,420	+4.5	2,306	545,019	+7.7	14,871,890	+5.6
East North Central	21,690	2,403,094	+1.7	69,025,784	+3.8	7,501	1,886,012	+2.3	56,014,857	+5.0
Ohio.....	8,039	667,814	+ .8	19,161,671	+2.9	2,525	505,344	+1.1	15,221,018	+4.6
Indiana.....	2,491	283,184	+2.9	7,874,558	+6.8	899	235,717	+3.9	6,812,880	+9.0
Illinois.....	8,344	651,567	+ .5	17,819,021	+5.4	2,422	459,728	+8.1	12,858,507	+5.8
Michigan.....	3,835	601,532	+3.1	18,842,838	+3.7	929	523,003	+4.3	16,895,179	+3.8
Wisconsin.....	981	196,406	+1.7	5,221,796	+3.1	726	162,220	+1.2	4,427,273	+2.8
West North Central	11,398	435,728	- (8)	10,662,310	+1.6	2,446	222,180	+ .6	5,493,408	+2.9
Minnesota.....	2,178	89,119	+1.7	2,288,157	+4.1	425	41,161	+1.5	1,064,515	+4.8
Iowa.....	1,785	63,330	-2.8	1,549,648	-2	416	38,122	-1.2	971,449	+2.7
Missouri.....	3,102	178,355	- .5	4,335,374	+1	896	102,872	+5	2,429,910	+5
North Dakota.....	534	5,007	+1.8	116,905	+1.0	57	681	+4.4	18,047	+1.8
South Dakota.....	492	7,937	+ .4	201,082	-1.7	39	2,212	-1.2	55,072	+1
Nebraska.....	1,584	33,711	+1.7	805,978	+3.6	158	11,647	+1.3	302,992	+7.3
Kansas.....	2,263	58,269	+3.4	1,365,166	+4.7	455	25,485	+1.7	651,423	+7.8
South Atlantic	11,109	880,446	-0.2	17,666,544	-0.9	2,750	592,551	+0.8	11,502,932	+4.4
Delaware.....	206	15,792	+3.2	409,059	+6.8	81	11,975	+3.9	305,524	+8.1
Maryland.....	1,536	158,047	+2.5	3,479,424	+5.5	568	96,628	+2.7	2,473,081	+6.5
District of Columbia.....	1,109	41,990	- .3	1,071,188	+1	37	3,746	-2.1	128,460	-2
Virginia.....	2,108	108,167	-1.6	2,154,794	-1.4	461	76,288	+1.0	1,518,666	+2.3
West Virginia.....	1,246	155,574	-1.5	3,660,756	-11.2	244	61,852	+2	1,703,589	+6.5
North Carolina.....	1,427	166,347	+ .7	2,687,664	+2.9	569	153,112	+9	2,442,516	+3.0
South Carolina.....	770	79,204	+ .5	1,216,690	+4.1	211	71,743	+4	1,079,429	+4.5
Georgia.....	1,552	121,854	+ .7	2,066,429	+2.5	385	94,855	+5	1,486,247	+3.7
Florida.....	1,155	53,471	-7.2	920,540	-5.1	194	22,352	-7.6	365,420	-4.5
East South Central	4,343	296,542	-3.8	5,670,104	-4.0	998	198,832	+ .7	3,736,460	+4.0
Kentucky.....	1,284	84,423	-5.6	1,835,231	-8.6	291	39,573	-5	902,343	+3
Tennessee.....	1,290	107,315	+ .8	1,978,144	+1.9	380	82,412	+2.0	1,484,372	+4.4
Alabama.....	1,227	88,198	-7.5	1,576,622	-5.8	239	66,822	+3	1,192,672	+6.7
Mississippi.....	542	16,606	-1.3	280,107	-4	88	10,025	-1.9	157,073	+2.0
West South Central	4,501	202,107	+1.2	4,596,103	+3.5	1,113	102,690	+1.4	2,211,739	+6.2
Arkansas.....	10,445	23,085	+1	440,776	+2.8	176	17,164	+1.2	312,502	+4.6
Louisiana.....	1,051	51,217	+ .8	995,296	+3.3	242	28,250	+1.3	493,997	+4.7
Oklahoma.....	1,371	41,868	+2.6	1,025,972	+3.2	142	12,471	+3.6	295,920	+6.2
Texas.....	11,634	85,937	+1.0	2,134,069	+3.9	553	44,805	+8	1,108,320	+7.3

¹ Includes banks and trust companies, construction, municipal, agricultural, and office employment, amusement and recreation, professional services, and trucking and handling.

² Includes laundering and cleaning, and water, light, and power.

³ Includes laundries.

⁴ Weighted percentage change.

⁵ Includes automobile and miscellaneous services, restaurants, and building and contracting.

⁶ Includes construction, but not hotels and restaurants or public works.

⁷ Does not include logging.

⁸ Less than 1/10 of 1 percent.

⁹ Includes financial institutions, miscellaneous services, and restaurants.

¹⁰ Includes automobile dealers and garages, and sand, gravel, and building stone.

¹¹ Includes business and personal service, and real estate.

TABLE 4.—Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1937, by Geographic Divisions and by States—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

Geographic division and State	Total—All groups					Manufacturing				
	Number of establish-ments	Number on pay roll April 1937	Per-cent-age change from March 1937	Amount of pay roll (1 week) April 1937	Per-cent-age change from March 1937	Number of establish-ments	Number on pay roll April 1937	Per-cent-age change from March 1937	Amount of pay roll (1 week) April 1937	Per-cent-age change from March 1937
<i>Dollars</i>										
Mountain	4,391	137,831	+1.5	3,644,132	+ .2	572	39,059	+4.7	1,038,311	+6.8
Montana	709	22,108	+2.2	687,616	+1.7	84	5,147	+2.2	153,750	+3.4
Idaho	473	10,256	+4.0	279,500	+10.5	55	2,960	+16.0	77,727	+32.6
Wyoming	326	8,912	-2.9	227,393	-14.7	36	1,629	+2.4	52,435	+4.4
Colorado	1,257	44,442	+ .4	1,109,137	- .8	192	17,027	+4.4	452,104	+5.4
New Mexico	317	7,737	+2.1	169,329	-2.9	34	1,263	+8.0	21,299	+7.4
Arizona	479	20,363	+5.4	557,269	+7.2	36	3,100	+3.3	76,983	+5.4
Utah	622	21,412	- .2	538,245	-2.7	108	6,929	+4.6	174,099	+7.7
Nevada	208	2,601	+ .9	75,643	+ .1	27	1,004	- .6	29,914	-4.3
Pacific	9,470	460,701	+4.0	12,632,951	+4.0	2,557	265,774	+6.7	7,388,447	+7.0
Washington	3,129	101,814	+ .9	2,795,602	+3.1	563	57,093	+ .9	1,572,746	+5.8
Oregon	1,338	54,357	+1.0	1,424,026	+4.5	306	31,810	+1.2	821,909	+7.6
California	¹² 5,003	304,550	+5.6	8,413,323	+4.3	1,688	176,871	+9.8	4,993,792	+7.8

¹² Includes banks, insurance, and office employment.

Industrial and Business Employment and Pay Rolls in Principal Cities

A comparison of April 1937 employment and pay rolls with the March totals in 13 cities of the United States having a population of 500,000 or over is made in table 5. The changes are computed from reports received from identical establishments in both months.

In addition to reports included in the several industrial groups regularly covered in the survey by the Bureau, reports have also been secured from establishments in other industries for inclusion in these city totals. As information concerning employment in building construction is not available for all cities at this time, figures for this industry have not been included in these city totals.

TABLE 5.—Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1937, by Principal Cities

City	Number of establish-ments	Number on pay roll April 1937	Percentage change from March 1937	Amount of pay roll (1 week) April 1937	Percentage change from March 1937
New York, N. Y.	17,384	734,010	-0.5	\$20,319,000	-1.1
Chicago, Ill.	4,529	499,285	+ .7	14,461,533	+4.5
Philadelphia, Pa.	2,486	240,082	+ .4	6,505,075	+ .5
Detroit, Mich.	1,639	398,062	+4.7	12,820,732	+5.7
Los Angeles, Calif.	2,838	160,424	+ .6	4,466,628	+1.4
Cleveland, Ohio	1,708	150,759	+1.1	4,367,896	+3.0
St. Louis, Mo.	1,575	141,891	+ .1	3,659,937	+2.3
Baltimore, Md.	1,213	107,792	+2.8	2,817,486	+7.0
Boston, Mass.	3,870	191,597	+ .2	4,836,527	+ .9
Pittsburgh, Pa.	1,374	212,315	-1.8	6,315,589	- .3
San Francisco, Calif.	1,654	92,913	+2.0	2,708,948	+2.3
Buffalo, N. Y.	922	73,885	-1.2	2,167,959	+2.4
Milwaukee, Wis.	717	96,224	+1.1	2,704,539	+4.7

Building Operations

SUMMARY OF BUILDING CONSTRUCTION IN PRINCIPAL CITIES, MAY 1937¹

DECREASES in permit valuations were indicated for all classes of building construction in May. Building activity measured by the value of permits issued decreased 16.1 percent. Compared with the preceding month new residential construction decreased 22.5 percent; new nonresidential construction, 9.8 percent; and additions, alterations and repairs, 9.4 percent.

The May rate of building activity, however, was far above the level of a year ago. The estimated cost of new residential construction showed a gain of 27.8 percent. There was an increase of 22.6 percent in the value of permits issued for new nonresidential construction and a gain of 17.0 percent in additions, alterations, and repairs. The increase in the total value of permits issued for all classes of building construction over the corresponding month of last year was 23.6 percent.

Comparisons of May 1937 with April 1937 and May 1936

A summary of building construction in 1,549 identical cities in May 1937, April 1937, and May 1936 is given in table 1.

TABLE 1.—*Summary of Building Construction in 1,549 Identical Cities, May 1937*

Class of construction	Number of buildings			Estimated cost		
	May 1937	Percentage change from—		May 1937	Percentage change from—	
		April 1937	May 1936		April 1937	May 1936
All construction.....	65,941	-5.3	+13.2	\$147,814,756	-16.1	+23.6
New residential.....	12,910	-15.0	+26.4	68,705,035	-22.5	+27.8
New nonresidential.....	11,924	-8.1	+11.2	45,755,287	-9.8	+22.6
Additions, alterations, and repairs.....	41,107	-.9	+10.2	33,354,434	-9.4	+17.0

¹ More detailed information by geographic divisions and individual cities is given in a separate pamphlet entitled "Building Construction, May 1937", copies of which will be furnished upon request.

A summary of the estimated cost of housekeeping dwellings and of the number of families provided for in new dwellings in 1,549 identical cities, having a population of 2,500 and over, is shown in table 2 for the months of May 1937, April 1937, and May 1936.

TABLE 2.—*Estimated Cost of Housekeeping Dwellings and Number of Families Provided for in 1,549 Identical Cities, May 1937*

Type of dwelling	Estimated cost of housekeep-ing dwellings			Number of families pro-vided for in new dwell-ings		
	May 1937	Percentage change from—		May 1937	Percentage change from—	
		April 1937	May 1936		April 1937	May 1936
All types.....	\$67,489,435	-22.7	+29.4	16,050	-24.9	+21.4
1-family.....	54,912,506	-14.1	+31.6	11,995	-14.2	+25.7
2-family ¹	2,879,127	-27.2	+42.2	993	-22.2	+39.1
Multifamily ²	9,697,802	-50.2	+15.4	3,062	-50.0	+3.5

¹ Includes 1- and 2-family dwellings with stores.

² Includes multifamily dwellings with stores.

Analysis by Size of City, April and May 1937

The estimated cost of building construction for which permits were issued in the 1,549 identical cities reporting for the months of April and May 1937, together with the number of family-dwelling units provided in new dwellings, by size of city, is given in table 3.

TABLE 3.—*Estimated Cost of Building Construction and Number of Families Provided for in New Dwellings in 1,549 Identical Cities, by Size of City, May 1937*

Size of city	Total building construction			Number of families provided for in—							
	May 1937	April 1937	Per-cent-age change	All types		1-family dwellings		2-family dwellings ¹		Multifamily dwellings ²	
				May 1937	April 1937	May 1937	April 1937	May 1937	April 1937	May 1937	April 1937
Total, all cities.....	\$147,814,756	\$176,170,860	-16.1	16,050	21,379	11,995	13,973	993	1,276	3,062	6,130
500,000 and over.....	49,255,786	62,960,966	-21.8	4,533	7,922	2,584	3,383	240	363	1,709	4,176
100,000 and under.....	30,525,703	36,727,034	-16.9	3,283	4,069	2,653	2,933	267	277	363	859
50,000.....	17,415,584	19,291,683	-9.7	1,597	1,893	1,227	1,366	147	188	223	339
25,000 and under.....	14,075,399	16,662,708	-15.5	1,619	1,786	1,380	1,542	93	143	146	101
10,000 and under.....	19,789,833	23,441,223	-15.6	2,638	3,134	2,272	2,627	110	200	256	307
5,000 and under.....	10,274,194	10,628,869	-3.3	1,556	1,587	1,161	1,249	63	66	332	272
2,500 and under.....	6,478,257	6,458,377	+.3	824	988	718	873	73	39	33	76

¹ Includes 1- and 2-family dwellings with stores.

² Includes multifamily dwellings with stores.

Construction During First 5 Months, 1936 and 1937

Cumulative totals for the first 5 months of 1937 compared with the same months of the preceding year are shown in table 4. The data are based on reports received from cities having a population of 2,500 and over.

TABLE 4.—Estimated Cost of Building Construction in Cities of 2,500 Population and Over, First 5 Months of 1936 and of 1937, by Class of Construction

Class of construction	Estimated cost of building construction, first 5 months of—		Percentage change
	1937	1936	
All construction.....	\$720,937,786	\$532,024,888	+35.5
New residential.....	345,495,139	218,096,066	+58.4
New nonresidential.....	223,052,766	199,146,887	+12.0
Additions, alterations, and repairs.....	152,389,881	114,781,935	+32.8

Table 5 presents the estimated cost of housekeeping dwellings and number of family-dwelling units provided in cities with a population of 2,500 and over, for the first 5 months of 1936 and 1937.

TABLE 5.—Estimated Cost and Number of Families Provided for in Cities of 2,500 Population and Over, First 5 Months of 1936 and of 1937, by Type of Dwelling

Type of dwelling	Housekeeping dwellings						
	Estimated cost			Number of families provided for			
	First 5 months of—		Per-centage change	First 5 months of—		Per-centage change	
	1937	1936		1937	1936		
All types.....	\$340,956,402	\$213,845,890	+59.4	84,646	52,802	+60.3	
1-family.....	244,281,448	162,176,281	+50.6	53,878	36,553	+47.4	
2-family ¹	14,583,187	8,432,660	+72.9	5,107	3,119	+63.7	
Multifamily ²	82,091,767	43,236,940	+89.9	25,661	13,130	+95.4	

¹ Includes 1- and 2-family dwellings with stores.

² Includes multifamily dwellings with stores.

The information on building permits issued during May 1937, April 1937, and May 1936 is based on reports received by the Bureau of Labor Statistics from 1,549 identical cities having a population of 2,500 and over.

The information is collected by the Bureau of Labor Statistics direct from local building officials, except in the States of Illinois, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania, where the State departments of labor collect and forward the information to the Bureau. The cost figures shown in this report are estimates made by prospective builders on applying for permits to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are included in the Bureau's

tabulation. In addition to permits issued for private building construction, the statistics include the value of contracts awarded for Federal and State buildings in the cities covered. Information concerning public building is collected by the Bureau from the various Federal and State agencies having the power to award contracts for building construction. These data are then added to the data concerning private construction received from local building officials. In May 1937 the value of Federal and State buildings for which contracts were awarded in these 1,549 cities amounted to \$5,640,000; in April 1937, to \$6,544,000; and in May 1936, to \$3,373,000.

Construction from Public Funds

The value of contracts awarded and force-account work started during May and April 1937, and May 1936 on various types of construction projects financed from Federal funds is shown in table 6.

TABLE 6.—*Value of Contracts Awarded and Force-Account Work Started on Projects Financed from Federal Funds, May and April 1937, and May 1936*¹

Federal agency	Value of contracts awarded and force-account work started		
	May 1937	April 1937 ²	May 1936 ³
Total.....	³ \$69,653,794	⁴ \$77,926,906	⁵ \$107,961,175
Public Works Administration:			
Federal.....	1,898,122	1,905,739	2,003,885
Non-Federal:			
N. I. R. A.....	⁶ 2,145,081	⁷ 2,581,670	16,360,506
E. R. A. 1935 and 1936 ⁸	⁹ 15,812,867	¹⁰ 25,635,431	⁵ 33,708,238
Federal projects under The Works Program.....	8,421,583	10,057,327	31,585,099
Regular governmental appropriations.....	41,376,141	37,746,739	24,303,447

¹ Preliminary, subject to revision.

² Revised.

³ Includes \$802,733 low-cost housing projects (Housing Division, P. W. A.).

⁴ Revised; includes \$1,877,928 low-cost housing projects (Housing Division, P. W. A.).

⁵ Revised; includes \$346,197 low-cost housing projects (Housing Division, P. W. A.).

⁶ Includes \$3,100 low-cost housing projects (Housing Division, P. W. A.).

⁷ Revised; includes \$71,103 low-cost housing projects (Housing Division, P. W. A.).

⁸ Includes First Deficiency Act funds, 1936.

⁹ Includes \$799,633 low-cost housing projects (Housing Division, P. W. A.).

¹⁰ Revised; includes \$1,806,825 low-cost housing projects (Housing Division, P. W. A.).

The value of public-building and highway-construction awards financed wholly from appropriations from State funds, as reported by the various State governments for May and April 1937, and May 1936 is shown in table 7.

TABLE 7.—*Value of Public-Building and Highway-Construction Awards Financed Wholly From State Funds*

Type of project	Value of contracts		
	May 1937	April 1937	May 1936
Public buildings.....	\$1,203,212	\$1,333,961	\$976,580
Highway construction.....	10,916,753	4,134,739	6,273,456

Retail Prices

FOOD PRICES IN MAY 1937

THE retail cost of food rose 1.0 percent between April 13 and May 18. An advance of 3.9 percent in the cost of fruits and vegetables together with increases of 2.0 percent for meats and 1.5 percent for cereals and bakery products more than offset decreased costs for dairy products, eggs, and fats and oils.

The index for all foods for May 18 was 86.5 percent of the 1923-25 average. This is an increase of 8.3 percent over food costs of a year ago, when the index was 79.9. This advance reflects higher costs for each commodity group, the increases ranging from 3.1 percent for beverages to 18.6 percent for fruits and vegetables. Food costs still average 15.5 percent lower than in May 1929. Cereals and bakery products, which have most nearly reached the level of 1929, now cost 2.9 percent less than in May of that year.

Details by Commodity Groups

The cost of cereals and bakery products rose 1.5 percent from April 13 to May 18. Most of this advance was due to the rise in bread prices. The price of white bread, which has been increasing steadily since February, gained 2.7 percent. The price of whole-wheat bread increased 1.9 percent and for rye bread the increase was 1.2 percent. The price of cornmeal was 0.8 percent higher. Wheat flour showed a decrease of 0.8 percent, although the price remained unchanged in 35 cities and decreases were in widely separated cities. There were no other significant price changes for items in this group.

There was a gain of 2.0 percent in the index for meats. The average increase for the beef items was 2.2 percent, with significant price increases for all of the items except beef liver. The increase for the pork items combined was 2.7 percent and was largely the result of price increases of 5.7 percent for pork chops and 6.5 percent for loin roast. Prices of the cured-pork products rose less than 1.0 percent. The average increase for lamb was 0.1 percent. The price of roasting chickens increased 1.3 percent. Meats are now 7.0 percent higher than a year ago. During the past year, the cost of beef has risen 11.4 percent and the pork items have advanced 4.7 percent.

The seasonal decrease in the cost of dairy products between April 13 and May 18 amounted to 1.9 percent. The price of butter declined 2.2 percent. The price of fresh milk, which decreased an average of

2.0 percent, was lower in 10 cities. In New York City the decrease amounted to 1.1 cents per quart; in Providence, Newark, and Springfield, Ill., to 1 cent per quart. In other cities the decreases were less pronounced. Although prices for all items in this group declined between April and May, they are well above the level of a year ago. The cost of eggs declined 4.6 percent to the level of the year, but remained 3.6 percent higher than in May of last year.

The index for fruits and vegetables advanced 3.9 percent. This rise was largely due to marked price increases for some of the fresh items. Prices of apples, oranges, cabbage, carrots, onions, and sweetpotatoes reached the high for this year. The greatest percentage increase, 26.9 percent, was for cabbage. Potato prices declined an average of 2.9 percent and were lower in 30 reporting cities. The cost of the canned and dried items rose 0.4 percent and 0.3 percent, respectively.

The cost of beverages and chocolate increased 0.2 percent. Prices were higher for each of the four items in the group. The prices of both coffee and tea have gained steadily throughout the year.

Fats and oils were 1.6 percent lower. The price of lard decreased 2.9 percent, continuing a downward movement which began in February. The price of lard compound declined 1.9 percent. Oleomargarine showed the first price decline since February, with a decrease of 2.0 percent. The price of vegetable shortening was slightly lower. The other items in the group, mayonnaise, salad oil, and peanut butter, continued a slow movement upward, which began early in the year.

An increase of 0.2 percent in the price of sugar, together with slight increases for other items in the group, resulted in an advance of 0.2 percent in the cost of sugar and sweets.

Indexes of retail food costs for May and April 1937, together with corresponding indexes for May 1936, 1933, and 1929, are shown in table 1. The chart on page 238 shows the trends in the costs of all foods and of each major commodity group for the period from January 1929 to May 1937, inclusive.

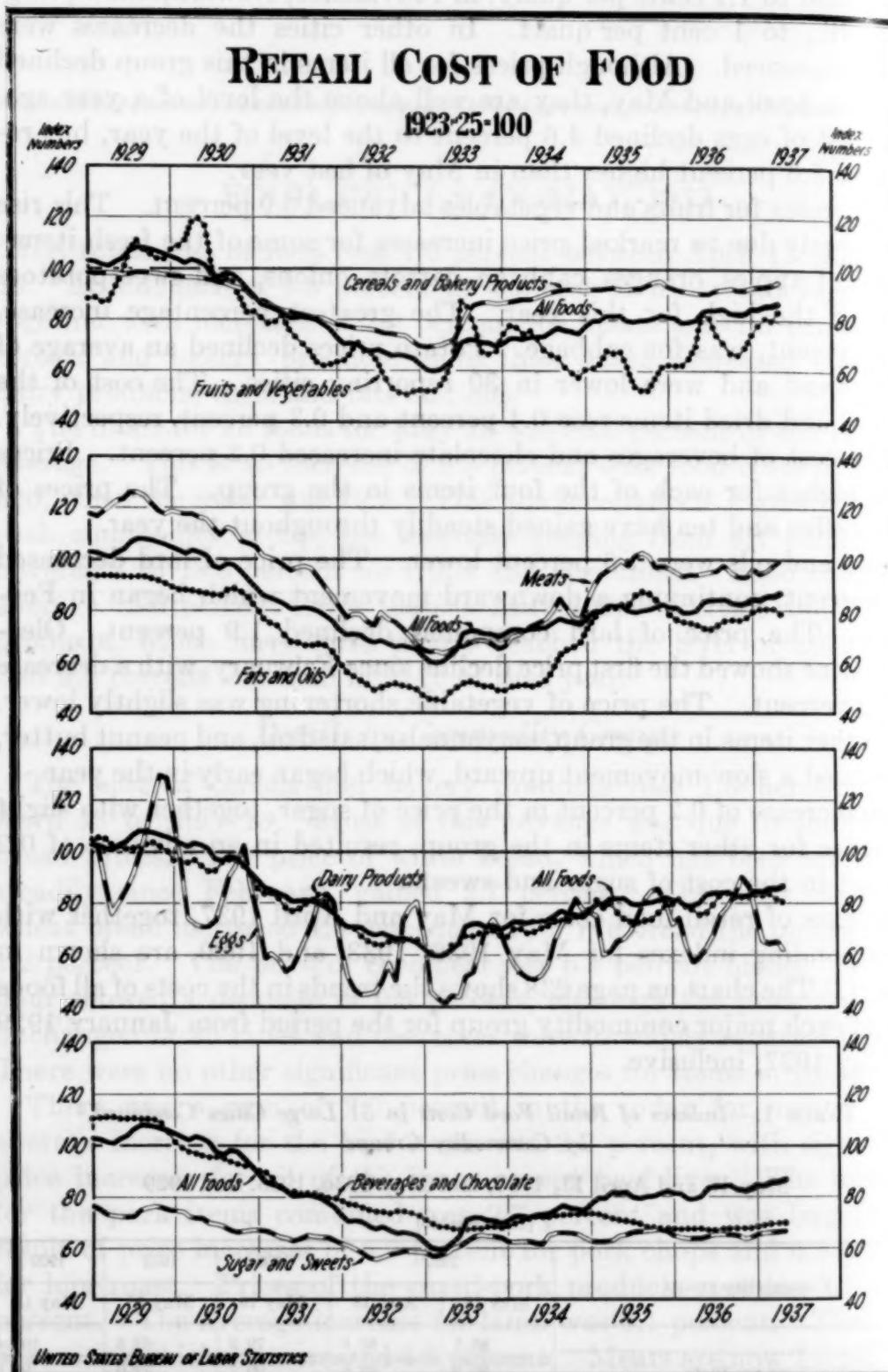
TABLE 1.—*Indexes of Retail Food Costs in 51 Large Cities Combined,¹ by Commodity Groups*

May 18 and April 13, 1937, and May 1936, 1933, and 1929

[1923-25=100]

Commodity group	1937		1936	1933	1929
	May 18	Apr. 13			
All foods.....	86.5	85.6	79.9	62.5	102.4
Cereals and bakery products.....	95.2	93.8	90.7	71.0	98.0
Meats.....	99.7	97.7	93.2	64.1	122.6
Dairy products.....	80.1	81.6	75.2	63.7	102.1
Eggs.....	61.8	64.7	59.6	44.0	80.6
Fruits and vegetables.....	83.1	80.0	70.1	59.3	93.1
Fresh.....	83.0	79.5	69.9	59.5	91.8
Canned.....	83.2	82.8	78.2	66.0	97.8
Dried.....	76.6	76.4	57.8	51.2	102.4
Beverages and chocolate.....	69.7	69.6	67.6	67.7	110.8
Fats and oils.....	78.9	80.2	74.2	48.0	93.5
Sugar and sweets.....	66.1	66.0	64.1	60.0	72.6

¹ Aggregate costs of 42 foods in each city prior to Jan. 1, 1935, and of 84 foods since that date, weighted to represent total purchases, have been combined with the use of population weights.



Prices of 58 of the 84 foods included in the index increased between April and May; 23 foods were lower in price; 3 foods showed no change. Prices of 70 of the 84 foods are higher than in May 1936. Average prices of each of the 84 foods for 51 cities combined are shown in table 2 for May and April 1937, and for May 1936.

TABLE 2.—*Average Retail Prices of 84 Foods in 51 Large Cities Combined¹*
May and April 1937 and May 1936

[*Indicates the 42 foods included in indexes prior to Jan. 1, 1935]

Article	1937		1936
	May 18	April 13	May 19
Cereals and bakery products:			
Cereals:			
*Flour, wheat.....	pound.....	5.0	5.0
*Macaroni.....	do.....	15.5	15.4
*Wheat cereal.....	28-oz. package.....	24.3	24.3
*Corn flakes.....	8-oz. package.....	8.1	8.1
*Corn meal.....	pound.....	5.6	5.5
Hominy grits.....	24-oz. package.....	9.7	9.7
*Rice.....	pound.....	8.6	8.5
*Rolled oats.....	do.....	7.5	7.4
Bakery products:			
*Bread, white.....	do.....	8.6	8.4
Bread, whole wheat.....	do.....	9.6	9.5
Bread, rye.....	do.....	9.3	9.2
Cake.....	do.....	25.3	25.3
Soda crackers.....	do.....	18.3	18.2
Meats:			
Beef:			
*Sirloin steak.....	do.....	42.3	41.5
*Round steak.....	do.....	38.1	37.1
*Rib roast.....	do.....	32.4	31.6
*Chuck roast.....	do.....	25.1	24.3
*Plate.....	do.....	16.8	16.6
Liver.....	do.....	25.4	25.3
Veal:			
Cutlets.....	do.....	41.3	40.8
Pork:			
*Chops.....	do.....	36.3	34.4
Loin roast.....	do.....	29.9	28.1
*Bacon, sliced.....	do.....	40.0	39.9
Bacon, strip.....	do.....	34.5	34.5
*Ham, sliced.....	do.....	49.2	49.0
Ham, whole.....	do.....	29.9	29.7
Salt pork.....	do.....	25.2	25.4
Lamb:			
Breast.....	pound.....	14.0	13.8
Chuck.....	do.....	23.9	23.8
*Loin.....	do.....	30.6	30.5
Rib chops.....	do.....	38.7	38.8
Poultry:			
*Roasting chickens.....	do.....	32.3	31.9
Fish:			
Salmon, pink.....	16-oz. can.....	13.0	13.0
*Salmon red.....	do.....	25.0	24.8
Dairy products:			
*Butter.....	pound.....	38.8	39.7
Cheese.....	do.....	28.9	29.3
Cream.....	½ pint.....	14.7	14.8
Milk, fresh (delivered and store) ²	quart.....	11.9	12.1
*Milk, fresh (delivered).....	do.....	12.1	12.3
*Milk, evaporated.....	14½-oz. can.....	7.6	7.6
Eggs.....	dozen.....	32.1	33.7
Fruits and vegetables:			
Fresh:			
Apples.....	pound.....	7.9	7.2
*Bananas.....	do.....	6.5	6.3
Lemons.....	dozen.....	31.2	31.2
*Oranges.....	do.....	38.8	37.6
Beans, green.....	pound.....	14.5	15.8
*Cabbage.....	do.....	5.4	4.3
Carrots.....	bunch.....	6.6	5.4
Celery.....	stalk.....	9.3	9.7
Lettuce.....	head.....	8.7	8.8
*Onions.....	pound.....	5.1	4.5
*Potatoes.....	do.....	3.6	3.7
Spinach.....	do.....	6.4	6.7
Sweetpotatoes.....	do.....	5.9	5.5

¹ Prices for individual cities are combined with the use of population weights.

² Average prices of milk delivered by dairies and sold in grocery stores, weighted according to the relative proportion distributed by each method.

TABLE 2.—Average Retail Prices of 84 Foods in 51 Large Cities Combined—Continued
May and April 1937 and May 1936—Continued

Article	1937			1936	
	May 18	April 13			
			May 19		
Fruits and vegetables—Continued.					
Canned:		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	
Peaches.....	no. 2½ can	19.3	19.1	17.6	
Pears.....	do	22.2	22.2	22.2	
Pineapple.....	do	22.7	22.6	22.2	
Asparagus.....	no. 2 can	27.7	27.7	26.0	
Beans, green.....	do	12.5	12.5	11.4	
*Beans with pork.....	16-oz. can	8.0	7.9	7.0	
*Corn.....	no. 2 can	13.2	13.3	11.2	
*Peas.....	do	16.5	16.3	15.8	
*Tomatoes.....	do	9.5	9.4	9.2	
Tomato soup.....	10½-oz. can	8.2	8.2	8.1	
Dried:					
Peaches.....	pound	17.5	17.5	17.1	
*Prunes.....	do	10.8	10.7	9.4	
*Raisins.....	15-oz. package	10.1	10.1	9.7	
Black-eyed peas.....	pound	10.0	10.1	8.8	
Lima beans.....	do	12.0	12.1	10.6	
*Navy beans.....	do	10.8	10.8	5.7	
Beverages and chocolate:					
*Coffee.....	do	25.4	25.3	24.4	
*Tea.....	do	72.2	71.9	67.9	
Cocoa.....	8-oz. can	10.5	10.4	10.6	
Chocolate.....	8-oz. package	17.0	16.9	16.5	
Fats and oils:					
*Lard.....	pound	16.9	17.4	15.9	
Lard compound.....	do	15.8	16.1	14.7	
*Vegetable shortening.....	do	21.9	22.1	21.4	
Salad oil.....	pint	25.8	25.7	24.7	
Mayonnaise.....	½ pint	17.4	17.3	17.0	
*Oleomargarine.....	pound	19.5	19.9	18.0	
Peanut butter.....	do	19.9	19.7	18.7	
Sugar and sweets:					
*Sugar.....	do	5.7	5.7	5.6	
Corn sirup.....	24-oz. can	14.6	14.5	13.6	
Molasses.....	18-oz. can	14.6	14.5	14.3	
Strawberry preserves.....	pound	22.1	22.0	20.3	

Details by Regions and Cities

The advance of 1.0 percent in the composite index was due to higher costs in each regional area except the West South Central, where there was a decline of 1.3 percent. The increase was least in the Pacific Coast cities. That the advance was general is evidenced by the fact that the greatest increases were reported from widely separated cities—Bridgeport, 3.4 percent; Scranton, 3.3 percent; Butte, 3.1 percent; and St. Louis, 2.8 percent. In each of these cities the increase in the cost of meats and of fruits and vegetables was well above the average for the 51 cities combined. In each city in the West South Central area the cost of fruits and vegetables declined, contrary to the general movement for this food group. Little Rock and Houston reported the greatest decrease. In each of these cities the cost of meats was lower and there were heavy declines in the prices of potatoes and eggs.

Indexes of retail costs of food by regions and cities are shown in table 3 for May and April 1937 and for May 1936.

TABLE 3.—*Indexes of the Average Retail Cost of All Foods, by Regions and Cities*¹

May and April 1937, and May 1936, 1935, 1933, 1932, and 1929

[1923-25=100]

Region and city	1937		1936	1935	1933	1932	1929
	May 18	Apr. 13	May 19	May 21	May 15	May 15	May 15
Average: 51 cities combined....	88.5	85.6	79.9	81.5	82.5	88.5	102.4
New England.....	83.4	82.0	78.4	79.2	81.4	87.9	100.8
Boston.....	80.8	79.3	76.9	77.4	60.0	65.9	100.8
Bridgeport.....	89.4	86.5	82.6	83.4	65.2	71.3	100.1
Fall River.....	86.2	84.9	79.1	79.7	60.2	67.5	99.9
Manchester.....	86.3	85.2	81.2	80.7	61.2	67.0	100.2
New Haven.....	88.7	87.0	82.4	83.5	64.5	73.0	102.2
Portland, Maine.....	85.8	84.2	78.5	79.5	64.0	71.0	102.1
Providence.....	83.9	83.7	77.8	78.4	61.7	67.5	99.5
Middle Atlantic.....	88.3	85.1	81.0	81.8	83.9	80.6	102.8
Buffalo.....	88.0	85.9	79.8	82.0	62.6	70.3	102.2
Newark.....	86.3	86.4	80.9	84.3	63.7	73.5	101.9
New York.....	84.4	84.1	81.8	82.2	66.3	72.8	101.9
Philadelphia.....	89.3	87.8	81.9	82.2	63.2	70.3	103.5
Pittsburgh.....	85.8	83.7	78.6	80.2	61.1	65.5	104.6
Rochester.....	89.9	87.6	82.3	80.9	59.7	67.6	102.6
Scranton.....	84.7	82.0	77.6	79.1	61.5	67.5	103.7
East North Central.....	88.2	87.5	80.1	82.0	81.6	87.0	104.0
Chicago.....	88.6	88.0	80.5	81.3	63.8	70.4	105.4
Cincinnati.....	90.5	88.9	84.3	85.1	62.5	68.0	108.7
Cleveland.....	86.6	85.2	79.1	82.5	59.3	65.7	101.7
Columbus, Ohio.....	87.5	86.1	82.5	84.8	61.3	66.9	102.6
Detroit.....	88.1	88.6	79.5	81.6	58.5	61.3	102.5
Indianapolis.....	88.5	87.9	79.3	80.0	59.4	65.9	104.4
Milwaukee.....	91.4	89.0	80.9	83.2	65.7	70.9	103.4
Peoria.....	89.6	88.4	80.3	83.0	62.4	66.3	100.7
Springfield, Ill.....	87.9	87.4	77.8	79.5	60.6	65.3	101.2
West North Central.....	92.3	90.7	82.7	87.0	82.1	87.8	103.4
Kansas City.....	91.0	89.7	80.5	90.6	63.8	68.3	101.2
Minneapolis.....	95.4	94.8	84.6	87.0	60.9	68.3	103.2
Omaha.....	88.0	87.3	79.6	85.1	59.2	64.7	98.8
St. Louis.....	93.8	91.3	85.1	86.1	63.4	68.6	107.9
St. Paul.....	91.6	90.4	81.4	84.8	60.1	68.6	100.7
South Atlantic.....	85.5	84.5	79.5	80.7	61.2	66.6	100.9
Atlanta.....	83.1	82.2	75.4	78.1	58.0	64.2	102.4
Baltimore.....	89.5	88.4	84.6	84.4	63.7	67.8	99.7
Charleston, S. C.....	84.3	84.2	78.6	78.6	59.1	68.3	99.5
Jacksonville.....	81.1	80.8	76.2	75.2	56.8	62.7	94.1
Norfolk.....	86.8	85.4	78.4	79.6	60.1	69.6	105.8
Richmond.....	82.7	81.9	75.7	77.5	59.2	64.2	101.3
Savannah.....	84.5	84.1	79.8	79.0	59.2	65.8	101.7
Washington, D. C.....	87.5	85.8	82.7	84.4	65.6	69.4	102.9
East South Central.....	83.6	83.2	75.1	77.9	59.1	64.6	102.9
Birmingham.....	79.5	79.6	70.7	72.4	56.3	61.2	98.8
Louisville.....	92.8	91.3	83.9	88.3	64.8	69.8	112.2
Memphis.....	84.8	84.4	77.8	80.8	60.0	68.2	102.1
Mobile.....	81.5	81.7	74.8	75.4	58.0	64.7	101.0
West South Central.....	82.9	84.0	76.6	79.1	60.6	65.0	101.6
Dallas.....	81.8	82.7	74.4	79.4	60.7	65.6	102.1
Houston.....	81.7	83.4	75.9	76.6	59.2	60.8	99.9
Little Rock.....	83.5	85.5	76.3	77.9	57.1	62.4	102.2
New Orleans.....	85.8	86.4	80.6	82.1	63.2	70.5	103.1
Mountain.....	92.5	91.7	83.0	86.6	63.4	68.4	99.8
Butte.....	86.6	84.0	77.2	80.2	61.6	65.0	100.8
Denver.....	94.9	94.5	85.3	80.7	65.8	70.2	100.9
Salt Lake City.....	89.9	88.6	80.4	83.1	59.7	66.4	97.8
Pacific.....	85.4	85.3	77.1	80.5	63.8	69.3	100.3
Los Angeles.....	81.9	82.3	72.3	76.1	59.4	65.0	98.9
Portland, Oreg.....	90.1	90.2	80.8	80.8	62.6	69.7	101.2
San Francisco.....	86.7	86.6	80.8	85.3	68.4	73.9	101.7
Seattle.....	89.7	88.4	80.0	81.5	66.0	70.6	100.3

¹ Aggregate costs of 42 foods in each city prior to Jan. 1, 1935, and of 84 foods since that date, weighted to represent total purchases, have been combined for regions and for the United States with the use of population weights.

The Bureau collects prices in 11 cities that cannot be included in the food-cost indexes, since no prices are available for the base period 1923-25. These cities were selected from areas formerly not adequately represented in the indexes.

Average prices for each of these cities for which the data were available have been released since June 1935. Consumption weights have been provided for these cities, making it possible to measure changes in food costs from one period to another. Percentage changes in food costs between April and May 1937 are shown in table 4 for 10 of these cities.

TABLE 4.—*Percentage Changes in Retail Food Costs*

[Cities not included in indexes]

Region and city	Percent of change May 18, 1937, compared with Apr. 13, 1937								
	All foods	Cereals and bakery products	Meats	Dairy products	Eggs	Fruits and vegetables	Beverages and chocolate	Fats and oils	Sugar and sweets
West North Central:									
Cedar Rapids.....	+3.1	-0.2	+2.9	-6.1	-13.1	+14.2	0.0	-0.9	0.0
Sioux Falls.....	+2.4	+.5	+6.5	+.2	-14.8	+5.2	-.7	+.4	+.3
Wichita.....	+1.7	0.0	+3.7	-1.1	-14.3	+7.3	0.0	-3.1	+.6
South Atlantic:									
Columbia, S. C.....	+2.7	+.6	+3.3	-.4	+.3	+6.1	+2.6	-1.3	-1.6
Winston-Salem.....	+1.8	+.8	-.6	-.3	-5.3	+7.1	0.0	-.5	0.0
East South Central:									
Jackson, Miss.....	-1.2	-.6	-5.4	-4.0	0.0	+2.1	+6.5	+1.8	-.3
Knoxville.....	-.9	+.9	0.0	-3.4	-10.8	+.1	-.1	-2.6	+.7
West South Central:									
El Paso.....	+.1	+.1	+1.9	-2.9	+.8	+.2	-.6	0.0	+1.1
Oklahoma City.....	+1.6	+1.2	+2.5	-1.7	-11.4	+6.6	-1.1	-1.5	+2.2
Pacific:									
Spokane.....	+2.8	+.1	+5.2	-1.4	-4.1	+8.0	0.0	+.7	+1.0



COAL PRICES

New Series of Index Numbers

INDEX numbers of retail coal prices as published heretofore by the Bureau of Labor Statistics have been based upon averages for the year 1913. All the other retail-price and cost-of-living series published by the Bureau were shifted more than a year ago to a 1923-25 base. Beginning with this report the retail coal price index will be presented upon a comparable base period.

The new series of index numbers of retail coal prices which are given on page 243 have been computed on the basis of averages for the period from October 1922 to September 1925, inclusive. The last 3 months in 1922 have been substituted for the final quarter of 1925 in order to eliminate from the base period the abnormally high prices which resulted from the 1925-26 strike in the Pennsylvania anthracite mines.

Index numbers of weighted average retail prices of stove and chestnut sizes Pennsylvania anthracite in 25 cities combined are shown in table 5 for all reporting periods from January 1929 through December 1936. The corresponding series of weighted average prices was given in the report for October 1936.

Table 5 also shows indexes of retail prices of bituminous coal in 38 cities combined for the period from January 1929 through December 1936. These indexes have been computed by shifting the base period for the old bituminous-coal price series from 1913 to the average for October 1922 to September 1925, inclusive, the period previously selected for the Pennsylvania anthracite indexes.

TABLE 5.—*Indexes of Average Retail Prices of Coal,
January 1929–December 1936*

[October 1922–September 1925=100]

Date	Pennsylvania anthracite, white ash, stove size (weighted average, 25 cities)							
	1929	1930	1931	1932	1933	1934	1935	1936
January	102.6	102.1	100.9	98.2	87.0	89.8	87.2	85.8
February	102.7	102.1	100.9	98.2	86.3	90.0	87.1	-----
March	102.8	102.1	100.9	93.2	86.1	90.0	87.1	-----
April	97.8	102.1	92.3	84.0	83.0	83.6	76.0	83.9
May	96.9	95.0	92.3	84.1	81.1	82.1	73.2	-----
June	98.3	95.2	93.4	84.9	81.5	82.4	72.9	-----
July	99.0	97.2	95.3	85.1	83.7	83.5	76.2	80.7
August	99.6	97.9	97.1	86.6	86.0	85.0	-----	-----
September	100.9	100.3	98.4	88.5	89.8	88.4	-----	83.0
October	101.8	100.6	98.4	89.1	89.8	88.3	84.0	-----
November	101.8	100.9	98.3	89.4	89.6	87.7	-----	-----
December	102.0	100.9	98.3	89.4	89.3	88.3	-----	83.9
Average	100.5	99.7	97.1	89.2	86.2	86.6	80.5	83.5
Pennsylvania anthracite, white ash, chestnut size (weighted average, 25 cities)								
January	99.4	99.2	98.7	99.4	86.7	88.4	85.2	83.8
February	99.8	99.1	98.6	99.3	86.1	88.6	85.2	-----
March	99.9	99.1	98.7	92.4	85.9	88.5	85.1	-----
April	95.0	99.1	93.2	84.2	82.6	82.5	75.6	82.8
May	94.0	93.1	93.0	83.5	79.5	80.8	72.1	-----
June	95.6	93.2	94.1	84.0	79.6	81.1	71.7	-----
July	96.3	95.0	96.1	84.2	82.3	82.3	74.6	79.8
August	96.7	95.8	97.9	85.5	84.5	83.7	-----	-----
September	98.1	98.1	99.2	87.3	88.2	86.3	-----	82.8
October	98.9	98.5	99.6	88.1	88.3	86.3	82.3	-----
November	99.1	98.8	99.4	88.5	88.3	85.2	-----	-----
December	99.1	98.8	99.4	88.4	88.0	85.8	-----	84.2
Average	97.7	97.3	97.3	88.7	85.0	85.0	79.0	82.7
Bituminous, various sizes (unweighted average, 38 cities)								
January	94.0	94.2	91.7	84.5	77.2	85.2	86.6	88.7
February	93.8	93.5	91.3	84.2	77.1	85.0	86.8	-----
March	93.7	93.3	90.1	82.8	76.8	85.1	86.8	-----
April	90.6	91.4	87.5	81.2	76.2	84.6	85.2	88.6
May	88.1	88.2	83.2	78.6	74.2	84.1	83.9	-----
June	87.9	88.3	82.7	77.9	74.3	84.6	83.3	-----
July	89.2	89.5	83.7	77.6	79.0	85.1	84.0	84.1
August	89.9	90.0	83.9	77.8	80.4	85.8	-----	-----
September	91.7	90.9	84.5	78.0	82.1	85.9	-----	85.9
October	92.9	91.8	85.0	78.6	83.6	86.4	87.0	-----
November	93.1	92.5	85.1	78.5	84.6	86.4	-----	-----
December	93.6	92.5	84.7	77.7	84.6	86.5	-----	88.2
Average	91.5	91.3	86.2	79.7	79.1	85.4	85.7	87.1

¹ Average of January, April, July, and October.

Weighted average prices of stove and chestnut sizes of Pennsylvania anthracite have been computed for each pricing period from October 1922 to September 1925, inclusive. These base period averages for the revised series of Pennsylvania anthracite prices are shown in table 6.¹

TABLE 6.—Retail Prices of Pennsylvania Anthracite per Ton of 2,000 Pounds Weighted Average for 25 Large Cities Combined

October 1922 to September 1925

Date	Pennsylvania anthracite, white ash					
	Stove			Chestnut		
	1922-23	1923-24	1924-25	1922-23	1923-24	1924-25
1922						
October 15.....	\$13.69	\$14.52	\$14.15	\$13.71	\$14.59	\$14.14
November 15.....	13.77	14.53	14.16	13.78	14.60	14.14
December 15.....	14.18	14.49	14.27	14.14	14.57	14.26
1923						
January 15.....	14.17	14.40	14.27	14.13	14.47	14.27
February 15.....	14.45	14.32	14.33	14.30	14.41	14.32
March 15.....	14.03	14.30	14.30	14.05	14.36	14.26
April 15.....	13.60	13.57	13.84	13.64	13.62	13.60
May 15.....	13.58	13.63	13.86	13.61	13.65	13.56
June 15.....	13.61	13.72	13.96	13.62	13.77	13.64
July 15.....	13.90	13.80	14.06	13.79	13.83	13.74
August 15.....	13.96	13.86	14.20	13.92	13.88	13.90
September 15.....	14.15	14.11	14.76	14.08	14.09	14.62
Average 12 months.....	13.93	14.10	14.18	13.90	14.15	14.04



RETAIL PRICES OF FOOD IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

THE accompanying table brings together the index numbers of retail prices of food published by certain foreign countries and those of the United States Bureau of Labor Statistics. The base periods used in the original reports have been retained. Indexes are shown for each year from 1926 to 1931, inclusive, and for the months as indicated since March 1932.

As shown in the table, the number of articles included in the indexes for the various countries differs widely. The indexes are not absolutely comparable from month to month over the entire period for certain countries, owing to slight changes in the list of commodities and localities included on successive dates.

¹ For details regarding the new series see Retail Prices, October 1936, p. 19.

TABLE 7.—Index Numbers of Retail Food Prices in the United States
and in Foreign Countries

Country	United States	Australia	Austria	Belgium	Bulgaria	Canada	China	Czechoslovakia
Computing agency	Bureau of Labor Statistics	Bureau of Census and Statistics	Federal Statistics Bureau	Ministry of Labor and Social Welfare	General Direction of Statistics	Dominion Bureau of Statistics	National Tariff Commission	Central Bureau of Statistics
Number of localities	51	30	Vienna	59	12	69	Shanghai	Prague
Commodities included	84 foods ¹	44 foods and groceries	18 foods	33 foods	35 foods	46 foods	24 foods	35 foods
Base=100	1923-25	1923-27 (1,000)	July 1914	1921	1926	1926	1926	July 1914
1926	108.5	1,027	116	2 170.7	100.0	100.0	100.0	2 117.8
1927	104.5	1,004	119	2 207.5	97.8	98.0	106.7	2 126.2
1928	103.3	989	119	2 207.4	102.5	98.6	92.1	2 125.5
1929	104.7	1,047	122	2 218.4	106.4	101.0	98.4	2 123.1
1930	99.6	946	118	2 208.6	86.7	98.6	118.8	114.3
1931	82.0	830	108	2 176.4	68.0	77.3	107.5	104.2
<i>1932</i>								
March	70.7	825	100	148.2	-----	66.1	114.2	100.1
June	67.6	803	113	143.8	-----	62.1	107.3	101.4
September	66.7	792	110	150.8	-----	63.0	102.6	97.6
December	64.7	759	109	156.9	-----	64.0	84.5	102.3
<i>1933</i>								
March	59.8	734	103	150.4	63.1	60.4	92.3	94.9
June	64.9	759	106	143.4	60.2	62.2	84.1	98.8
September	72.0	768	104	151.2	60.4	65.9	88.0	94.2
December	69.7	769	104	153.6	62.4	66.6	79.8	92.7
<i>1934</i>								
March	72.7	774	101	141.1	62.7	72.9	75.0	75.9
June	73.3	777	102	134.0	60.7	67.6	75.4	79.6
September	77.0	791	101	146.1	61.0	68.8	106.7	77.1
December	74.8	794	100	144.0	62.1	69.3	90.4	75.8
<i>1935</i>								
March	79.8	795	98	130.8	60.7	69.5	85.7	76.7
June	81.7	805	103	141.4	60.0	69.3	89.5	82.7
September	80.0	826	101	154.3	59.1	70.9	89.8	81.8
October	80.2	827	103	159.5	59.6	72.4	86.3	81.4
November	80.9	820	103	162.7	60.6	73.2	90.3	81.0
December	82.1	813	102	160.1	61.1	73.7	88.9	81.6
<i>1936</i>								
January	81.2	812	102	161.4	60.6	73.9	93.3	82.1
February	80.9	815	101	161.7	61.3	72.9	98.6	82.5
March	79.2	807	99	158.5	60.5	73.4	102.2	82.0
April	79.3	815	98	155.3	59.8	71.0	97.9	82.1
May	80.0	816	99	151.1	59.8	71.3	97.6	82.5
June	83.4	818	103	153.3	60.1	71.3	99.3	83.2
July	84.0	825	100	149.0	61.2	72.6	99.8	82.2
August	84.0	839	101	155.7	59.8	74.7	105.7	81.9
September	84.3	842	101	160.2	60.4	75.1	102.3	81.3
October	82.8	844	101	164.7	61.9	74.4	102.7	88.3
November	82.5	847	102	168.5	63.1	75.0	103.3	87.6
December	82.9	854	101	169.0	63.5	75.3	106.8	87.7
<i>1937</i>								
January	84.6	857	100	171.3	63.5	75.2	111.3	-----
February	84.5	848	99	172.6	63.9	75.6	111.0	-----
March	85.4	-----	99	170.5	63.6	75.7	104.9	-----

¹ Based on 42 foods prior to Jan. 2, 1935.

² Average computed by Bureau of Labor Statistics.

³ July.

⁴ Koruna devalued approximately 16 percent by law of Oct. 9, 1936.

TABLE 7.—Index Numbers of Retail Food Prices in the United States and in Foreign Countries—Continued

Country	Estonia	Finland	France	Germany	Hungary	India	Ireland	Italy
Computing agency	Bureau of Statistics	Ministry of Social Affairs	Commission of Cost of Living	Federal Statistical Bureau	Central Office of Statistics	Labor Office	Department of Industry and Commerce	Office Provincial of Economy
Number of localities	Tallin	21	Paris	72	Budapest	Bombay	105	Milan
Commodities included	52 foods	14 foods	Foods	37 foods	12 foods	17 foods	29 foods	18 foods
Base = 100	1913	January-June 1914	January-June 1914	October 1913-July 1914	1913	July 1914	July 1914	January-June 1914
1926	118	1,107.8	2 529	144.4	113.3	2 152	179	654.7
1927	112	1,115.1	2 536	151.9	124.8	2 151	170	558.7
1928	120	1,150.2	2 539	153.0	127.7	2 144	169	517.0
1929	126	1,123.5	2 584	155.7	124.1	2 146	169	542.8
1930	103	971.2	2 609	145.7	105.1	2 134	160	519.3
1931	90	869.0	2 611	131.0	96.2	2 102	147	451.9
1932								
March	83	911.2	561	117.3	89.8	103	2 151	445.6
June	80	871.0	567	115.6	93.3	99	2 144	438.0
September	79	891.4	534	113.6	92.9	101	2 134	409.7
December	75	910.2	531	112.9	86.7	103	2 135	433.9
1933								
March	75	869.8	542	109.4	86.1	98	2 130	416.6
June	74	881.7	532	113.7	84.4	95	2 126	402.9
September	81	920.1	530	114.4	77.3	94	2 129	401.5
December	79	881.2	548	117.8	74.3	88	2 140	468.9
1934								
March	78	865.3	548	116.5	75.7	84	2 133	406.8
June	77	852.0	544	117.8	79.6	85	2 129	383.3
September	73	885.7	525	119.2	77.9	90	2 134	377.8
December	72	922.1	516	119.1	75.7	90	2 143	390.5
1935								
March	76	884.6	494	118.8	78.2	89	2 136	389.8
June	73	887.5	491	120.6	79.8	92	2 132	398.3
September	77	930.4	466	120.9	85.0	94	2 140	403.9
October	83	947.1	-----	119.6	84.2	94	-----	-----
November	83	943.2	-----	119.9	83.6	96	150	-----
December	83	936.4	481	120.9	84.9	96	-----	-----
1936								
January	84	904.2	-----	122.3	85.8	96	-----	-----
February	86	908.1	-----	122.3	86.7	93	145	-----
March	87	905.0	495	122.2	87.3	94	-----	-----
April	87	891.2	-----	122.4	88.5	92	-----	-----
May	87	882.2	-----	122.4	88.2	92	141	-----
June	90	883.8	514	122.8	86.4	92	-----	-----
July	-----	891.7	-----	124.0	85.8	93	-----	-----
August	93	910.2	525	124.2	87.5	93	145	-----
September	91	906.4	-----	122.0	88.0	94	-----	-----
October	92	909.8	-----	121.7	88.1	95	-----	-----
November	90	917.5	562	121.3	86.7	96	155	-----
December	92	919.4	-----	121.0	88.5	95	-----	-----
1937								
January	97	930.5	-----	121.4	93.2	97	-----	-----
February	97	-----	-----	121.9	93.6	97	153	-----
March	97	-----	-----	122.3	93.4	96	-----	-----

² Average computed by Bureau of Labor Statistics.

³ Index for following month.

TABLE 7.—Index Numbers of Retail Food Prices in the United States and in Foreign Countries—Continued

Country	Nether-lands	New Zealand	Norway	Poland	South Africa	Sweden	Switzer-land	United Kingdom
Computing agency	Bureau of Statistics	Census and Statistics Office	Central Bureau of Statistics	Central Statistical Office	Office of Census and Statistics	Board of Social Welfare	Federal Labor Office	Ministry of Labor
Number of localities	Amster-dam	25	31	Warsaw	9	49	34	509
Commodities included	Foods	58 foods	89 foods	25 foods	20 foods	49 foods	28 foods	14 foods
Base=100	1911-13	1926-30 (1,000)	July 1914	1928	1914 (1,000)	July 1914	June 1914	July 1914
1926	161.3	1,026	2 198	88.5	2 1,178	2 158	160	164
1927	162.9	983	2 175	102.0	2 1,185	2 152	158	160
1928	166.4	1,004	168	100.0	2 1,169	2 154	157	157
1929	162.4	1,013	158	97.0	2 1,153	2 150	156	154
1930	150.2	974	152	83.7	2 1,101	2 140	152	145
1931	135.8	845	139	73.9	2 1,049	2 131	141	130
1932								
March	118.8	792	135	65.8	903	8 125	128	129
June	119.2	778	133	69.5	963	8 124	125	123
September	119.7	758	134	62.1	927	8 125	122	123
December	119.2	713	132	57.9	926	8 123	120	125
1933								
March	115.5	712	130	60.0	950	8 119	116	119
June	116.5	723	130	59.5	989	8 120	116	114
September	121.1	746	132	56.0	987	8 123	117	122
December	128.3	751	129	56.5	1,050	8 120	117	126
1934								
March	125.5	769	128	54.6	1,038	8 120	115	120
June	123.2	778	132	51.2	1,041	8 123	115	117
September	123.6	771	135	51.4	1,027	8 125	114	126
December	122.3	792	134	48.6	1,021	8 124	114	127
1935								
March	118.5	819	135	47.4	1,024	8 126	112	122
June	117.6	835	138	49.6	1,039	8 129	113	120
September	117.2	837	140	52.2	1,003	-----	116	125
October		875	142	52.4	998	131	117	128
November		873	142	52.0	1,006	-----	118	131
December	119.2	855	142	48.7	1,014	-----	118	131
1936								
January		841	142	47.7	1,016	132	118	131
February		830	143	46.9	1,046	-----	118	130
March	117.0	827	144	46.9	1,015	-----	118	129
April		845	145	48.4	1,024	134	119	126
May		861	144	49.3	1,029	-----	119	125
June	118.5	869	145	48.4	1,030	-----	120	126
July		875	145	48.6	1,011	134	120	129
August		878	142	48.0	1,003	-----	120	129
September	120.9	899	143	48.3	1,000	-----	121	131
October		894	143	49.4	1,002	132	123	132
November		901	144	49.6	1,007	-----	123	136
December	122.1	914	145	50.3	1,000	-----	123	136
1937								
January		910	148	52.5	1,001	133	126	136
February		916	150	54.5	1,004	-----	129	135
March		152	54.7	1,013	-----	-----	129	135

¹ Average computed by Bureau of Labor Statistics.
² July.

* Index for following month.

Wholesale Prices

WHOLESALE PRICES IN MAY 1937

FOLLOWING the rising market in wholesale commodity prices during the past six months, sharp declines in quotations on farm products, foods, textile products, and chemicals and drugs caused the all-commodity index for May to decrease 0.7 percent. Although the general index receded to 87.4 percent of the 1926 average, it is 1.7 percent above the year's low of January and 11.2 percent above the level for May 1936.

In addition to the farm products, foods, textile products, and chemicals and drugs groups, metals and metal products and miscellaneous commodities declined fractionally. Minor increases were recorded by the hides and leather products, fuel and lighting materials, building materials, and housefurnishing goods groups.

Wholesale market prices of raw materials and semimanufactured articles fell sharply during May. Despite the decline both groups are substantially above their levels of a year ago. Finished product prices continued to rise during May and are approximately 9 percent above the corresponding month of last year.

The large groups of "all commodities other than farm products" and "all commodities other than farm products and foods" each declined slightly but are 9.5 percent higher than a year ago.

A comparison of the May level of wholesale commodity prices with April 1937 and May 1936 is shown in table 1.

TABLE 1.—Comparison of Index Numbers of Wholesale Prices for May 1937 with April 1937 and May 1936

[1926=100]

Commodity groups	May 1937	April 1937	Change from a month ago	May 1936	Change from a year ago
			Percent		Percent
All commodities.....	87.4	88.0	-0.7	78.6	+11.2
Farm products.....	89.8	92.2	-2.6	75.2	+19.4
Foods.....	84.2	85.5	-1.5	78.0	+7.9
Hides and leather products.....	106.7	106.3	+.4	94.0	+13.5
Textile products.....	78.7	79.5	-1.0	69.8	+12.8
Fuel and lighting materials.....	77.2	76.8	+.5	76.0	+1.6
Metals and metal products.....	95.8	96.5	-.7	86.3	+11.0
Building materials.....	97.2	96.7	+.5	85.8	+13.3
Chemicals and drugs.....	84.5	86.9	-2.8	77.7	+8.8
Housefurnishing goods.....	89.3	89.0	+.3	81.5	+9.6
Miscellaneous.....	80.5	81.1	-.7	69.2	+16.3
Raw materials.....	87.1	88.7	-1.8	75.8	+14.9
Semimanufactured articles.....	87.5	89.5	-2.2	74.1	+18.1
Finished products.....	87.5	87.4	+.1	80.5	+8.7
All commodities other than farm products.....	86.7	86.9	-.2	79.2	+9.5
All commodities other than farm products and foods.....	86.3	86.5	-.2	78.8	+9.5

Wholesale Price Level in May

Wholesale commodity prices declined 0.7 percent from April to May as measured by the general index of 784 price series. This represents the first decline in the monthly index since last October and it brought the all-commodity level to 87.4 percent of the 1926 average. Compared with May 1936, the all-commodity index is up 11.2 percent.

Six of the 10 major groups averaged higher during the month. These were farm products, foods, textile products, metals and metal products, chemicals and drugs, and miscellaneous commodities. Hides and leather products, fuel and lighting materials, building materials, and housefurnishing goods, on the other hand, were fractionally higher. Compared with their year ago levels, all groups are higher. The increases range from 1.6 percent for fuel and lighting materials to 19.4 percent for farm products.

Fluctuations within the commodity groups that influenced the movement of the all-commodity index in May are shown in table 2.

TABLE 2.—*Number of Items Changing in Price from April to May 1937*

Commodity group	Increase	Decrease	No change
All commodities.....	156	192	436
Farm products.....	15	48	4
Foods.....	27	60	35
Hides and leather products.....	11	9	21
Textile products.....	13	29	70
Fuel and lighting materials.....	14	4	6
Metals and metal products.....	28	15	87
Building materials.....	19	10	57
Chemicals and drugs.....	11	6	72
Housefurnishing goods.....	9	2	50
Miscellaneous.....	9	9	34

The index for the large group of "all commodities other than farm products" reflecting the movement in prices of nonagricultural commodities declined 0.2 percent during May but is 9.5 percent above a year ago. Industrial commodity prices, measured by the index for the "all commodities other than farm products and foods" group, also declined 0.2 percent during the month but remained 9.5 percent above a year ago.

Wholesale prices of raw materials continued to decline. The May index—87.1—is 1.8 percent below the April level. Compared with a year ago, however, raw material prices are up 14.9 percent. The semimanufactured commodity group index—87.5—decreased 2.2 percent but is 18.1 percent above May of last year. Continuing the upward movement which began in October, finished product prices rose 0.1 percent. Although the advance was slight it raised the group index—87.5—to a point 8.7 percent above a year ago.

The largest decline—2.8 percent—was recorded in the chemicals and drugs group. Average prices of drugs and pharmaceuticals dropped 4.5 percent due primarily to weakening prices for glycerine. Chemicals declined 3.3 percent as a result of lower prices for copper sulphate and tallow. Fertilizer materials declined slightly but mixed fertilizer prices were fractionally higher.

Market prices of farm products fell 2.6 percent during the month. Grains decreased 4.5 percent due to weakening prices for barley, oats, and wheat. Quotations on steers, sheep, poultry, cotton, eggs, lemons, alfalfa hay, hops, fresh milk, peanuts, seeds, and potatoes also were lower. The livestock and poultry subgroup advanced 2.5 percent due principally to higher prices for cows and hogs. Clover and timothy hay also averaged higher. Although the farm products group index dropped to 89.8 percent of the 1926 average, it is 19.4 percent above May 1936.

A decline of 6.9 percent in the dairy products subgroup largely accounted for the 1.5 percent drop in wholesale food prices. However, cereal products and other foods such as cocoa beans, copra, oleo oil, edible tallow, and vegetable oils also averaged lower. Additional individual food items for which lower prices were reported were butter, powdered milk, wheat flour, dried apricots and prunes, canned corn, fresh beef at New York, lamb, mutton, and dressed poultry. Meats averaged 1.0 percent higher and the fruit and vegetable subgroup rose 0.8 percent. Higher prices were reported for corn meal, canned apricots, bananas, cured beef, veal, coffee, glucose, and corn starch. The food index—84.2—is 7.9 percent higher than a year ago.

Sharp declines in prices of raw silk, silk yarns, and cotton goods caused the index for textile products to decline 1.0 percent. Knit goods and woolen and worsted goods were slightly lower, while clothing and other textiles such as raw jute and manila hemp were higher.

The index for metals and metal products declined 0.7 percent as a result of lower prices for scrap steel and nonferrous metals including antimony, lead, lead pipe, tin, zinc ingot, copper, and copper and brass manufactures. Average prices of agricultural implements advanced 1.9 percent. Ferromanganese, spiegeleisen, and quicksilver also advanced. The motor vehicles and plumbing and heating subgroups remain unchanged at last month's level.

Crude rubber prices declined 9.4 percent during May and cattle feed dropped 4.7 percent. Paper and pulp advanced 0.8 percent. Quotations were higher on certain other items of the miscellaneous commodity group such as laundry starch, Pennsylvania neutral oil, and paraffin wax.

The fuel and lighting materials group index rose 0.5 percent to the highest level reached since October 1930. The advance was the result of higher prices for gasoline, anthracite, coke, and gas. Wholesale prices for kerosene and bituminous coal declined.

Rising prices for millwork items, redwood and cedar lumber, rosin, and brick caused the building materials group index to advance 0.5 percent. Paint materials were fractionally lower. Average prices for cement and structural steel were steady.

Continuing the upward movement which began in August of last year, the index for the hides and leather products group rose 0.4 percent to 106.7. The advance was due to higher prices for shoes. Hides and skins and leather were lower.

Increases of 0.4 percent in average prices for furniture and furnishings caused the index for the housefurnishing goods group to advance 0.3 percent.

Index numbers for the groups and subgroups of commodities for May and April 1937, and for May of each of the past 7 years are shown in table 3.

TABLE 3.—*Index Numbers of Wholesale Prices, by Groups and Subgroups of Commodities*

[1926=100]

Groups and subgroups	May 1937	April 1937	May 1936	May 1935	May 1934	May 1933	May 1932	May 1931	May 1930
All commodities	87.4	88.0	78.6	80.2	73.7	62.7	64.4	73.2	88.8
Farm products	89.8	92.2	75.2	80.6	59.6	50.2	46.6	67.1	93.0
Grains	113.9	119.2	70.6	83.2	63.9	52.8	42.6	59.6	82.1
Livestock and poultry	95.9	93.6	82.5	87.6	47.8	46.8	44.4	64.1	93.2
Other farm products	79.0	83.4	71.4	75.0	65.0	51.8	49.6	71.5	96.5
Foods	84.2	85.5	78.0	84.1	67.1	59.4	59.3	73.8	92.2
Dairy products	73.1	78.5	75.0	77.7	67.1	58.8	59.6	78.1	92.3
Cereal products	88.7	89.8	82.2	92.3	87.3	69.3	68.1	74.6	84.0
Fruits and vegetables	84.1	83.5	72.3	66.3	68.2	58.8	61.5	76.1	109.4
Meats	95.9	94.9	85.1	97.0	60.0	52.3	55.5	74.4	101.3
Other foods	75.2	77.0	71.5	77.7	60.8	60.4	54.9	67.9	79.7
Hides and leather products	106.7	106.3	94.0	88.3	87.9	76.9	72.5	87.6	102.6
Shoes	106.1	103.8	100.2	97.2	98.5	83.6	88.4	94.8	103.7
Hides and skins	117.7	121.4	87.3	76.1	73.5	67.3	35.7	62.6	96.8
Leather	100.6	100.7	84.4	79.6	76.3	68.3	60.6	88.1	104.2
Other leather products	102.3	102.3	95.4	84.4	86.8	77.2	97.9	101.4	105.7
Textile products	78.7	79.5	69.8	69.4	73.6	55.9	54.3	67.4	83.4
Clothing	87.2	86.8	81.1	78.5	82.7	61.9	62.9	76.9	87.2
Cotton goods	92.6	95.1	75.5	82.7	86.3	57.9	52.9	69.2	89.0
Knit goods	65.7	65.9	60.6	60.4	65.3	48.0	50.5	60.7	83.6
Silk and rayon	32.5	33.8	29.1	27.6	26.5	29.1	29.1	41.4	68.1
Woolen and worsted goods	93.3	93.5	82.2	73.5	81.0	61.5	58.3	68.5	80.0
Other textile products	68.9	68.8	67.5	68.2	77.3	70.7	67.2	76.7	87.6
Fuel and lighting materials	77.2	76.8	76.0	73.1	72.5	60.4	70.7	65.3	80.3
Anthracite	74.2	72.4	76.6	73.0	75.7	78.5	85.6	87.5	86.7
Bituminous coal	98.5	93.6	96.5	95.7	94.6	78.3	82.0	83.9	88.5
Coke	105.1	102.8	93.7	88.7	84.5	75.2	77.1	83.7	84.0
Electricity	(1)	(1)	84.2	88.7	88.9	94.6	106.1	93.0	93.4
Gas	(1)	80.7	87.3	92.0	94.6	99.5	103.0	99.0	97.9
Petroleum products	60.9	59.8	58.2	52.2	50.7	31.2	47.2	35.9	66.5
Metals and metal products	95.8	96.5	86.3	86.6	89.1	77.7	80.1	85.0	93.5
Agricultural implements	93.8	92.1	94.2	93.6	91.1	83.0	84.9	94.3	94.6
Iron and steel	99.6	99.6	86.3	86.6	90.2	75.2	80.0	83.8	90.1
Motor vehicles	93.7	93.7	93.0	94.4	97.3	90.4	93.8	94.5	102.6
Nonferrous metals	91.7	97.0	70.7	69.2	68.1	56.6	48.3	63.3	82.3
Plumbing and heating	78.7	78.7	73.8	67.1	75.0	61.3	64.4	86.6	96.2
Building materials	97.2	96.7	85.8	84.8	87.3	71.4	71.5	80.0	92.4
Brick and tile	95.0	94.9	88.8	89.3	91.2	75.2	77.4	83.7	90.6
Cement	95.5	95.5	95.5	94.9	89.4	81.8	75.0	79.7	92.2
Lumber	103.0	103.0	83.0	79.8	85.9	59.6	59.5	69.4	89.6
Paint and paint materials	83.7	83.9	78.8	79.9	80.3	70.7	73.9	80.2	92.8
Plumbing and heating	78.7	78.7	73.8	67.1	75.0	61.3	64.4	86.6	96.2
Structural steel	114.9	114.9	92.0	92.0	94.5	81.7	81.7	84.3	91.9
Other building materials	101.3	99.9	89.9	89.8	92.0	78.8	78.2	86.3	94.5

¹ Data not yet available.

TABLE 3.—*Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities—Continued*

Groups and subgroups	May 1937	April 1937	May 1936	May 1935	May 1934	May 1933	May 1932	May 1931	May 1930
Chemicals and drugs.....	84.5	86.9	77.7	81.2	75.4	73.2	73.6	80.5	90.2
Chemicals.....	91.1	94.2	84.1	87.5	78.6	80.9	79.1	83.9	95.3
Drugs and pharmaceuticals.....	79.2	82.9	73.2	74.2	72.8	55.0	58.7	63.2	68.5
Fertilizer materials.....	70.6	70.7	64.7	65.9	66.4	66.8	69.4	80.5	86.5
Mixed fertilizers.....	72.2	72.0	65.3	73.1	73.2	63.1	69.0	82.8	93.6
Housefurnishing goods.....	89.3	89.0	81.5	80.6	82.0	71.7	74.8	86.8	93.5
Furnishings.....	92.5	92.1	85.0	84.1	84.1	72.0	75.5	83.6	92.4
Furniture.....	86.1	85.8	77.9	77.1	80.1	71.6	74.1	90.4	94.6
Miscellaneous.....	80.5	81.1	69.2	68.7	69.8	58.9	64.4	70.5	80.4
Automobile tires and tubes.....	56.4	56.4	47.5	45.0	44.6	37.6	39.2	46.9	53.0
Cattle feed.....	139.9	146.8	71.2	107.0	72.5	54.4	45.9	67.9	110.3
Paper and pulp.....	94.6	93.9	80.5	80.0	83.7	70.7	76.5	81.5	86.6
Rubber, crude.....	44.6	49.3	32.3	24.9	27.7	10.2	6.7	13.7	29.2
Other miscellaneous.....	85.5	85.3	80.7	79.4	83.6	74.0	84.6	88.5	98.5
Raw materials.....	87.1	88.7	75.8	77.6	65.1	53.7	53.9	66.5	87.8
Semimanufactured articles.....	87.5	89.5	74.1	73.5	73.7	61.3	58.1	69.8	83.1
Finished products.....	87.5	87.4	80.5	82.4	77.8	67.2	70.3	76.9	90.1
All commodities other than farm products.....	86.7	86.9	79.2	80.0	76.6	65.4	68.1	74.5	87.9
All commodities other than farm products and foods.....	86.3	86.5	78.8	77.6	78.9	66.5	70.4	75.1	87.3

Index Numbers of Wholesale Prices by Commodity Groups

Index numbers of wholesale prices by commodity groups, by years, from 1926 to 1936, inclusive, and by months from January 1936 to May 1937, inclusive, are shown in table 4.

TABLE 4.—*Index Numbers of Wholesale Prices, by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
By years:											
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927.....	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928.....	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	96.7
1929.....	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930.....	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931.....	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1932.....	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.5	75.1	64.4	64.8
1933.....	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.6	75.8	62.5	65.9
1934.....	65.3	70.5	86.6	72.9	73.3	86.9	86.2	75.9	81.5	69.7	74.9
1935.....	78.8	83.7	89.6	70.9	73.5	86.4	85.3	80.5	80.6	68.3	80.0
1936.....	80.9	82.1	95.4	71.5	76.2	87.0	86.7	80.4	81.7	70.5	80.3
By months:											
1936:											
January.....	78.2	83.5	97.1	71.7	75.1	86.7	85.7	80.5	81.4	67.8	80.6
February.....	79.5	83.2	96.1	71.0	76.1	86.7	85.5	80.1	81.5	68.1	80.6
March.....	76.5	80.1	94.9	70.8	76.2	86.6	85.3	79.3	81.4	68.3	79.6
April.....	76.9	80.2	94.6	70.2	76.4	86.6	85.7	78.5	81.5	68.6	79.7
May.....	75.2	78.0	94.0	69.8	76.0	86.3	85.8	77.7	81.5	69.2	78.6
June.....	78.1	79.9	93.8	69.7	76.1	86.2	85.8	78.0	81.4	69.7	79.2
July.....	81.3	81.4	93.4	70.5	76.2	86.9	86.7	79.4	81.2	71.0	80.5
August.....	83.8	83.1	93.6	70.9	76.3	87.1	86.9	79.8	81.4	71.5	81.6
September.....	84.0	83.3	94.6	70.9	76.1	86.8	87.1	81.7	81.7	71.3	81.6
October.....	84.0	82.6	95.6	71.6	76.8	86.9	87.3	82.2	82.0	71.5	81.5
November.....	85.1	83.9	97.0	73.5	76.8	87.9	87.7	82.5	82.3	73.4	82.4
December.....	88.5	85.5	99.7	76.3	76.5	89.6	89.5	85.3	83.2	74.5	84.2
1937:											
January.....	91.3	87.1	101.7	77.5	76.6	90.9	91.3	87.7	86.5	76.2	85.9
February.....	91.4	87.0	102.7	77.5	76.8	91.7	93.3	87.8	87.9	77.3	86.3
March.....	94.1	87.5	104.2	78.3	76.2	96.0	95.9	87.5	88.4	79.5	87.8
April.....	92.2	85.5	106.3	79.5	76.8	96.5	96.7	86.9	89.0	81.1	88.0
May.....	89.8	84.2	106.7	78.7	77.2	95.8	97.2	84.5	89.3	80.5	87.4

The price trend since 1926 is shown in table 5 for the following groups of commodities: Raw materials, semimanufactured articles, finished products, commodities other than farm products, and commodities other than those designated as farm products and foods. All commodities, with the exception of those included in the groups of farm products and foods, have been included in the group "all commodities other than farm products and foods." The list of commodities included under the designations "raw materials", "semimanufactured articles", and "finished products" was given in the October 1934 issue of the Wholesale Prices pamphlet.

TABLE 5.—*Index Numbers of Wholesale Prices, by Special Groups of Commodities*

[1926=100]

Year and month	Raw	Semi-	Fin-	All	All	Year and month	Raw	Semi-	All	All
	mat-	man-	ished	com-			mat-	man-	mod-	com-
	ma-	ufac-	pro-	mod-	mod-		ma-	ufac-	mod-	mod-
1926.....	100.0	100.0	100.0	100.0	100.0	1936—Continued.				
1927.....	96.5	94.3	95.0	94.6	94.0	April.....	77.0	74.5	81.6	80.1
1928.....	99.1	94.5	95.9	94.8	92.9	May.....	75.8	74.1	80.5	79.2
1929.....	97.5	93.9	94.5	93.3	91.6	June.....	77.6	73.9	80.7	79.4
1930.....	84.3	81.8	88.0	85.9	85.2					78.8
1931.....	65.6	69.0	77.0	74.6	75.0	July.....	79.8	75.2	81.6	80.3
1932.....	55.1	59.3	70.3	68.3	70.2	August.....	81.5	75.6	82.4	80.9
1933.....	56.5	65.4	70.5	69.0	71.2	September.....	81.8	75.9	82.3	80.9
1934.....	68.6	72.8	78.2	76.9	78.4	October.....	82.1	76.2	82.0	80.9
1935.....	77.1	73.6	82.2	80.2	77.9	November.....	83.1	78.6	82.6	81.7
1936.....	79.9	75.9	82.0	80.7	79.6	December.....	85.6	82.3	83.8	83.1
1936:						1937:				82.2
January.....	78.1	74.8	82.4	80.9	78.8	January.....	88.1	85.4	84.9	84.6
February.....	79.1	74.6	82.2	80.7	79.0	February.....	88.3	85.5	85.4	85.0
March.....	77.4	74.4	81.3	80.2	78.9	March.....	90.1	89.6	86.4	86.3
						April.....	88.7	89.5	87.4	86.9
						May.....	87.1	87.5	87.5	86.7
										86.3

Weekly Fluctuations

Wide variations in wholesale prices of farm products and foods during May caused the weekly all-commodity index to fluctuate erratically. Due primarily to falling prices of farm products and foods, it declined 0.1 percent and 0.5 percent, respectively, during the first 2 weeks. A sharp upward movement in prices of both farm products and foods between May 15 and 22 brought the index up 0.6 percent, offsetting the decline of early May. Minor fluctuations in the groups during the last week of the month did not affect the index. It remained at 87.4, the level for the preceding week and also for the week ended May 1.

The variations in the group classifications during May are shown by the weekly index numbers in table 6. The percentage changes from week to week in the groups are given in table 7.

TABLE 6.—*Weekly Index Numbers of Wholesale Prices, by Commodity Groups*

[1926 = 100]

Commodity groups	May 29, 1937	May 22, 1937	May 15, 1937	May 8 1937	May 1, 1937	Apr. 24, 1937	Apr. 17, 1937	Apr. 10, 1937	Apr. 3, 1937
All commodities	87.4	87.4	86.9	87.3	87.4	87.5	87.6	87.9	88.3
Farm products	91.0	91.2	89.3	91.0	91.5	92.7	92.4	93.5	96.0
Foods	84.9	85.1	84.2	84.7	85.2	85.0	85.3	86.1	87.9
Hides and leather products	107.0	107.1	107.6	107.7	106.8	106.7	107.2	106.8	106.0
Textile products	77.9	78.1	78.2	78.3	78.6	78.6	78.7	78.6	78.2
Fuel and lighting materials	78.2	78.2	78.2	78.2	77.9	77.6	77.5	77.1	77.2
Metals and metal products	95.1	95.0	95.0	94.8	95.1	95.1	95.8	96.3	96.1
Building materials	97.2	96.9	96.9	96.8	96.6	96.6	96.8	96.8	96.6
Chemicals and drugs	83.6	83.5	83.9	84.4	85.2	85.6	86.6	87.0	87.0
Housefurnishing goods	90.9	90.8	90.8	90.8	90.8	90.4	90.3	90.3	90.3
Miscellaneous	80.2	80.5	80.4	80.4	80.6	80.9	81.0	80.1	80.0
Raw materials	87.4	87.7	86.6	87.8	88.1	88.7	88.5	89.2	90.9
Semimanufactured articles	87.1	87.2	87.4	87.7	88.4	88.8	89.7	90.3	90.4
Finished products	87.9	87.7	87.3	87.4	87.4	87.1	87.3	87.3	87.1
All commodities other than farm products	86.7	86.5	86.3	86.4	86.5	86.4	86.6	86.6	86.6
All commodities other than farm products and foods	86.3	86.3	86.3	86.3	86.3	86.2	86.5	86.3	86.1

TABLE 7.—*Weekly Changes (Percent) During May 1937, by Groups of Commodities*

Commodity groups	Percentage change from—					
	Apr. 24 to May 29	May 22 to May 29	May 15 to May 22	May 8 to May 15	May 1 to May 8	Apr. 24 to May 1
All commodities	-0.1	0.0	+0.6	-0.5	-0.1	-0.1
Farm products	-1.8	-2	+2.1	-1.9	-.5	-1.3
Foods	-.1	-2	+1.1	-.6	-.6	+.2
Hides and leather products	+.3	-.1	-.5	-.1	+.8	+.1
Textile products	-.9	-.3	-.1	-.1	-.4	-.0
Fuel and lighting materials	+.8	.0	.0	.0	+.4	+.4
Metals and metal products	.0	+.1	.0	+.2	-.3	.0
Building materials	+.6	+.3	.0	+.1	+.2	-.0
Chemicals and drugs	-.2	+.1	-.5	-.6	-.9	-.5
Housefurnishing goods	+.6	+.1	.0	.0	.0	+.4
Miscellaneous	-.9	-.4	+.1	.0	-.2	-.4
Raw materials	-1.5	-.3	+1.3	-1.4	-.3	-.7
Semimanufactured articles	-1.9	-.1	-.2	-.3	-.8	-.5
Finished products	+.9	+.2	+.5	-.1	.0	+.3
All commodities other than farm products	+.3	+.2	+.2	-.1	-.1	+.1
All commodities other than farm products and foods	+.1	.0	.0	.0	.0	+.1

Monthly Average Wholesale Prices and Index Numbers of Individual Commodities

The table showing monthly average wholesale prices and index numbers of individual commodities formerly appearing in the Wholesale Prices pamphlet is now published semiannually instead of monthly. The December 1936 issue showed the average for the year 1936 and information for the last 6 months of 1936. The monthly figures will be furnished upon request.

Recent Publications of Labor Interest

JUNE 1937

Child Labor

Child workers in America. By Katherine Du Pre Lumpkin and Dorothy Wolff Douglas. New York, Robert M. McBride & Co., 1937. 321 pp.

The "place of child labor in the general system of our economic life" is discussed under the subjects, "Children on the market," "Demand and supply," and "Prospects for control." To the authors, it seems evident that a thoroughgoing program for the control of child labor "can be consummated only by the labor movement."

The Children's Bureau—yesterday, today, and tomorrow. Washington, U. S. Children's Bureau, 1937. 57 pp., illus. Report on organization, objectives, and achievements.

Civilian Conservation Corps

List of leading articles on the Civilian Conservation Corps published in magazines and newspapers from April 1933 through December 1936. Washington, [U. S. Emergency Conservation Work Organization, 1937]. 15 pp.; mimeographed.

To make the Civilian Conservation Corps a permanent agency. Hearings, April 14 and 15, 1937, before Committee on Labor, House of Representatives, 75th Congress, 1st session, on H. R. 6180. Washington, 1937. 114 pp.

Tabulations are given showing estimated number of C. C. C. enrollees, by States, for the period April 5, 1933, to February 28, 1937, and the work completed by the C. C. C. from April 1933 to January 31, 1937. There is also a directory of the C. C. C. camps, by States.

Cooperative Movement

Consumers' cooperation: An examination of its principles, social relationships, achievements, and present status. Edited by J. G. Brainerd. (In *The Annals of the American Academy of Political and Social Science*, Philadelphia, vol. 191, May 1937, pp. 1-201.)

The cooperative movement and better nutrition. Geneva, Switzerland, International Labor Office (American branch, 734 Jackson Place, Washington, D. C.), 1937. 66 pp. (Studies and Reports, Series B, No. 24.)

Report of the inquiry on cooperative enterprise in Europe, 1937. Washington, U. S. Inquiry on Cooperative Enterprise, 1734 New York Avenue NW., 1937. 321 pp., charts.

The recommendations of the committee, and a summary of its general findings, were given in the May 1937 Monthly Labor Review (pp. 1182-1186), and data on cooperative housing activities, taken from the report, were published in the Review for June 1937 (pp. 1439-1446).

Cost of Living

Money disbursements of wage earners and clerical workers in five Pennsylvania cities. By Alice C. Hanson. Washington, U. S. Bureau of Labor Statistics, 1937. 16 pp. (Serial No. R. 556, reprint from June 1937 Monthly Labor Review.)

Money disbursements of families of Negro wage earners and clerical workers in Richmond, Birmingham, and New Orleans. Washington, U. S. Bureau of Labor Statistics, 1937. 10 pp. (Serial No. R. 550, reprint from April 1937 *Monthly Labor Review*.)

Onderzoek naar den toestand van ondersteunde werkloozen en hun gezinnen (October 1934–Februari 1935). Amsterdam, Bureau van Statistiek, 1937. 243 pp.

The results of an investigation of living conditions of unemployed workers on relief in the city of Amsterdam, during the period from October 1934 to February 1935, including data from 78 families as to income, expenditures, and products and services consumed. Printed in Dutch with table of contents and résumé in French and, in separate pamphlet, French translations of terms used in the tables.

Elinkustannustutkimus vuodelta 1928: B, Maataloustyöläisperheet. Helsinki, [Sosiaaliministeriö, Sosiaalinen Tutkimustoimisto], 1937. 121 pp.

This report on cost of living of agricultural workers in Finland is the second part of a study of cost of living in that country in 1928. General agricultural conditions are reviewed and data are given on earnings of farm hands in kind and money, and on family budgets. Printed in Finnish and Swedish, with table of contents, table heads, and résumé in French.

Economic and Social Problems

Banking and the business cycle: A study of the great depression in the United States. By C. A. Phillips, T. F. McManus, and R. W. Nelson. New York, Macmillan Co., 1937. 274 pp.

The portion of the book that deals with labor is mainly in chapter 9, which presents an argument in favor of reduced wage rates during depression on the ground that unit costs would thus be reduced and that business men as a result would be induced to expand their investments and increase employment.

Capital and employment. By R. G. Hawtrey. London, Longmans, Green & Co., 1937. 348 pp.

Theoretical treatise on the relation of investment to employment. In general, the author is in agreement with those who attribute depression and unemployment to labor costs, which are viewed as being too high to induce investors to make full use of labor and capital, but his main interest is in banking and credit policies.

The economic system in a socialist state. By R. L. Hall. London, Macmillan & Co., Ltd., 1937. 263 pp.

Considers the problems of economic adjustment under socialism in the absence of automatic adjustments by competitive prices. The author rejects the view that the pricing of capital goods under socialism is impossible and describes the theoretical conditions under which a socialistic pricing system might be developed.

Middletown in transition: A study in cultural conflicts. By Robert S. Lynd & Helen Merrell Lynd. New York, Harcourt, Brace & Co., 1937. 604 pp.

A sequel to the earlier volume by the same authors—*Middletown, A Study in Contemporary American Culture*. The present volume deals with the changes in community life and thought since 1925. The authors conclude that the experiences of boom and depression since 1925 have introduced no basic change in the texture of the community's culture. Even the conflicts and tensions associated with adjustments to the depression "are not so much new as more insistent." The one exception noted is the emergence of "tenuous and confused new positive values" among the working classes.

Education and Guidance

Education of gainful workers [in Michigan]. Lansing, State Emergency Welfare Relief Commission, 1937. 20 pp. (Michigan Census of Population and Unemployment, first series, no. 7.)

Aptitudes and aptitude testing. By Walter Van Dyke Bingham. New York, Harper & Bros. (for National Occupational Conference, 551 Fifth Avenue), 1937. 390 pp.

Basic concepts and the place of tests in counseling are discussed in part I of this volume under the main subject, aptitudes and guidance. Part 2 treats of the classification of occupations, their educational requirements, and changing trends in opportunities. Part 3 is devoted to the practice of testing. Descriptions of representative tests and schedules for the indication of individual interest are given in the appendix.

A guide to mental testing for psychological clinics, schools, and industrial psychologists. By Raymond B. Cattell. London, University of London Press, Ltd., 1936. 312 pp.

A handbook in which the author has aimed to include sufficient instructions, test materials, and norms to assist in estimating the chief aspects of personality, so far as they have been made accessible to precise examination. The volume is also a guide to other available mental tests.

Handbook of vocational guidance, secondary and public schools. By C. A. Oakley, Angus Macrae, and Edith O. Mercer. London, University of London Press, Ltd., 1937. 337 pp., illus.

Stresses the need for vocational guidance, and discusses intelligence, special abilities, and other qualities, and the technique of the vocational-guidance examination. A considerable portion of the volume deals with test material and occupational requirements. A bibliography is appended.

Employment and Unemployment

Duration of unemployment of workers seeking reemployment [in Michigan]. Lansing, State Emergency Welfare Relief Commission, 1937. 24 pp. (Michigan Census of Population and Unemployment, first series, no. 5.)

The percentage distribution of jobless workers by months of unemployment, and the median duration of unemployment in selected industries, are shown for different age and occupation groups.

Geographic and occupational mobility of gainful workers [in Michigan]. Lansing, State Emergency Welfare Relief Commission, 1937. 14 pp. (Michigan Census of Population and Unemployment, first series, no. 8.)

Social-economic occupational classification of workers in selected industries [in Michigan]. Lansing, State Emergency Welfare Relief Commission, 1937. 20 pp. (Michigan Census of Population and Unemployment, first series, no. 4.)

The incidence of unemployment among the various occupational groups in the principal industries differed significantly. Among the nonagricultural workers, an average of only 4.7 percent in the professional group and 24.4 percent in the unskilled group were unemployed, as compared with 35.1 percent of the agricultural workers.

Partial unemployment: A report and recommendations to the [New Hampshire] legislature. Concord, State Bureau of Labor, Unemployment Compensation Division, 1937. 24 pp., chart.

A study of the relative importance of the hazard of partial unemployment to the worker as compared with total unemployment. The study, based on the employment records of employees in 31 concerns in New Hampshire, showed that partial unemployment is as significant a risk to the worker as total unemployment, carrying with it a loss of wages and lowering of the standard of living equal to or greater than complete lack of employment for some portion of the employees. From these findings it is concluded that a system of compensating for partial unemployment should be devised.

The labor market and the unemployed. By Buel W. Patch. Washington, Editorial Research Reports (vol. 1, 1937, no. 16), 1013 Thirteenth Street, NW., 1937. 18 pp.

Discussion of employment problems in the recovery period, covering occupational characteristics of job seekers, vocational training and apprenticeship, hiring-age limits, and the older worker.

Public Works Administration aids to education. Washington, U. S. Federal Emergency Administration of Public Works, 1937. 43 pp., map, charts, illus.

One of the sections of the report deals with direct and indirect employment resulting from the construction of school buildings. For certain projects, statistics are presented on number of men employed, man-hours, and wages, by occupations.

Second annual report of London Regional Advisory Council for Juvenile Employment, 1936. London, Ministry of Labor, 1937. 9 pp.

Employment Offices

Report of activities of Ohio State Employment Service, 1936. Columbus, 1937. 71 pp., charts; mimeographed.

Engineering Profession

Employment in the engineering profession, 1929 to 1934. By Andrew Fraser, Jr. Washington, U. S. Bureau of Labor Statistics, 1937. 16 pp. (Serial No. R. 543, reprint from April 1937 Monthly Labor Review.)

Security of employment in the engineering profession. By Andrew Fraser, Jr. Washington, U. S. Bureau of Labor Statistics, 1937. 14 pp. (Serial No. R. 561, reprint from May 1937 Monthly Labor Review.)

Family Allowances

Family allowances in Italy. By Bruno Biagi. (In International Labor Review Geneva, Switzerland, April 1937, pp. 457-487.)

Describes the family-allowance system instituted in Italy in connection with the 40-hour week, under the agreement of October 11, 1934; the development of the scheme leading up to the legislative decree of August 21, 1936; and the subsequent extension of family allowances to include commercial workers and workers employed in credit and insurance undertakings.

Farm Labor and Farm Tenancy

Compensation as a means of improving the farm-tenancy system. By Marshall Harris. Washington, U. S. Resettlement Administration, Land Utilization Division, 1937. 109 pp.; mimeographed. (Land Use Planning Publication No. 14.)

Outlines the kinds of compensation that may be made, traces the development of the policy, and draws upon specific cases to point out the results.

Agricultural planning and farm wages in New Zealand. By E. J. Riches. (In International Labor Review, Geneva, Switzerland, March 1937, pp. 293-328, charts; also reprinted.)

Shows the effects of recent legislation on the position of farm labor.

Handicrafts

Handicrafts in India. By S. K. Raja. (In International Labor Review, Geneva, Switzerland, April 1937, pp. 488-504.)
A brief preliminary study of the subject.

Housing

Housing becomes a national issue—a review of the Wagner-Steagall bill. By Charles Yale Harrison. New York, New York City Housing Authority, 10 East 40th Street, 1937. 20 pp.

An analysis of the bill, preceded by a general survey of the need for better housing.

Housing—a European survey: Vol. 1, England, France, Holland, Sweden, Denmark, and Spain. London, Building Center Committee, 158 New Bond Street, W. 1, 1936. 435 pp., plans, illus.

A profusely illustrated volume showing exterior views and floor plans of assisted housing projects in the principal cities of six foreign countries. Provisions for State or community aid to housing are reviewed in each case, and facts regarding financing, planning, and sizes of dwellings are supplied.

A housing tale of two cities, London and New York. By Charles Yale Harrison. New York, New York City Housing Authority, 10 East 40th Street, 1937. 19 pp.

The legislative background of the British post-war housing program is shown and pertinent questions are asked and answered. This section is followed by an account of the extent of public housing in London and the beginnings and needs in New York.

Industrial Accidents and Workmen's Compensation

Summary and analysis of accidents on steam railways in the United States subject to the Interstate Commerce Act, for the calendar year 1935. Washington, U. S. Interstate Commerce Commission, Bureau of Statistics, 1936. 98 pp., charts. (Accident Bulletin No. 104.)

Reviewed in this issue.

Cost of industrial accidents in Illinois for the year 1936. Chicago, Illinois Department of Labor, Division of Statistics and Research, 1937. 36 pp.; mimeographed.

The total direct costs and estimated indirect costs of industrial accidents in Illinois in 1936 are shown to have approximated \$38,000,000, exclusive of hospital, medical, and funeral expenses. The direct costs were represented by \$7,422,919 in compensation payments on 32,409 cases closed during the year, involving 608,633 weeks' disability. The compensation paid for fatal cases averaged \$2,659, for permanent total disability \$5,422, for permanent partial disability \$463, and for temporary total disability \$52; the general average for all closed cases combined was \$229.

Additional data on costs are given in detail in the report, by industries, causes, sex, age, and extent of disability. Six decisions of the Illinois Supreme Court on the Workmen's Compensation Act are included.

Experience with silicosis under Wisconsin Workmen's Compensation Act, 1920 to 1936. By Max D. Kossoris and O. A. Fried. Washington, U. S. Bureau of Labor Statistics, 1937. 13 pp. (Serial No. R. 559, reprint from May 1937 Monthly Labor Review.)

Weight lifting by industrial workers. London, Home Office, 1937. 45 pp., illus. (Safety Pamphlet No. 16.)

A study of the hazards from weight lifting in industry, showing something of the extent and causes of such accidents and discussing methods of reducing them.

Traité théorique et pratique de la législation sur les accidents du travail et les maladies professionnelles. By Adrien Sachet. Paris, Recueil Sirey, 22 rue Soufflot, 1937. 731 pp.

The eighth edition of this work on legislation on industrial accidents and occupational diseases and the administration of the laws in France, including Alsace and Lorraine, and in Algeria.

Yrkesinspektionens verksamhet dr 1935. Stockholm, Socialstyrelsen, 1937. 84 pp., diagrams, illus.

This annual report of the Swedish Industrial Inspectorate for the year 1935 is devoted principally to prevention of accidents and occupational diseases. Extracts from reports of the district inspectors describe various cases, together with safety devices and safety measures, and summary tables present statistics in connection with the 358 fatal and 110,460 nonfatal accidents, and the 49 cases of occupational disease, reported to the inspectors. The number of accidents which occurred in undertakings not supervised by the inspectors was 20,907, including 138 resulting in death. Printed in Swedish, with table of contents also in French

Industrial Home Work

Industrial home work in Pennsylvania in 1936. Harrisburg, Department of Labor and Industry, Bureau of Women and Children, 1937. 12 pp.; mimeographed.

Statistical data on the extent of industrial home work in Pennsylvania, giving the number of licensed firms and licensed home workers in each of the industries using that method of production, and median weekly hours, median hourly earnings, and estimated weekly wages of the chief home worker, by industry. The provisions of a proposed bill to regulate home work are outlined.

Three cents an hour: An intimate picture of industrial home work in Pennsylvania. By Myrl Cowdrick. Harrisburg, Department of Labor and Industry, Bureau of Women and Children, 1936. 16 pp., illus.

Presents brief sketches of the personal circumstances and earnings of individual home workers, and summarizes the status of legislative efforts to regulate industrial home work in Pennsylvania.

Industrial Hygiene

Occupational hazards and the painter, with special reference to New York. By Adolph B. Gersh. New York, Brotherhood of Painters, Decorators, and Paperhangers of America, New York District Council No. 9, 1937. 99 pp., illus., charts.

An analysis of the major industrial hazards in the painting trade, based on a case study of 646 injured painters.

Program for prevention and compensation of silicosis. Washington, U. S. Bureau of Labor Statistics, 1937. 6 pp. (Serial No. R. 545, reprint from April 1937 Monthly Labor Review.)

Sickness and insurance: A study of the sickness problem and health insurance. By Harry Alvin Millis. Chicago, University of Chicago Press, 1937. 166 pp.

Reviews the problem of sickness in industry in the United States, compulsory health insurance abroad, and the movement for compulsory health-insurance in the United States. A suggested plan for compulsory insurance is given.

Transactions of the thirty-fourth annual conference of State and Territorial health officers with the United States Public Health Service, April 13-14, 1936. Washington, U. S. Public Health Service, [1936?]. 197 pp.; mimeographed.

The program of the conference included a symposium on industrial hygiene and a general discussion of training of personnel under the Social-Security program.

Industrial Relations

Review of strikes in 1936. By Don Q. Crowther. Washington, U. S. Bureau of Labor Statistics, 1937. 15 pp. (Serial No. R. 569.)

In addition to the detailed data for 1936, statistics of number of strikes, workers involved, and man-days of idleness, with indexes thereof, are given for each year back to and including 1916.

The maritime strikes of 1936-37. Washington, U. S. Bureau of Labor Statistics, 1937. 15 pp. (Serial No. R. 541, reprint from April 1937 Monthly Labor Review.)

"Sit-Down." By Joel Seidman. (In *New Frontiers*, League for Industrial Democracy, 112 East 19th Street, New York City, January 1937, pp. 9-40; illus.)

Lists the outstanding "sit-down" strikes that have occurred in this country and abroad, discusses the origin of the practice, and describes the conduct of some of the more important demonstrations.

Control of the sit-down strike. By Buel W. Patch. Washington, Editorial Research Reports (vol. 1, 1937, no. 12), 1013 Thirteenth Street, NW., 1937. 18 pp.

Continuous discharge books for seamen. Hearing, March 1-4, 1937, before Committee on Merchant Marine and Fisheries, House of Representatives, 75th Congress, 1st session, on H. J. Res. 121 and H. J. Res. 143. Washington, 1937. 419 pp.

Seniority rights under labor union working agreements. By C. Lawrence Christensen. (In *Temple Law Quarterly*, Temple Law School, Philadelphia, April 1937, pp. 355-381; also reprinted.)

Problems in labor relations: A case book presenting some major issues in the relations of labor, capital, and government. By Herman Feldman. New York, Macmillan Co., 1937. 353 pp.

Designed primarily for class use in the study of labor problems. Explicit situations are described, conflicting views are stated, and questions are formulated for discussion and analysis of a large number of problems.

State compacts. Washington, Chamber of Commerce of the United States, Special Committee on State Compacts, 1937. 21 pp.

Discusses the theory and practice of concurrent and joint action by States, with the consent of Congress, to meet common problems, and the creation of State commissions on interstate cooperation. The application of that method is declared to be "especially appropriate" to uniform regulation of working conditions and labor relations.

International Labor Office

Report of the director of the International Labor Office to the International Labor Conference, 23d session, Geneva, Switzerland, 1937. Geneva, International Labor Office (American branch, 734 Jackson Place, Washington, D. C.), 1937. 82 pp.

Labor Legislation and Court Decisions

Pennsylvania's labor program. (In *The Laborgraphic*, Harrisburg, Pennsylvania Department of Labor and Industry, May 1937; 31 pp., illus.)

This report, which comprises the first issue of a new bulletin of the Pennsylvania Department of Labor and Industry, sets forth the features beneficial to labor in various provisions of recently-enacted and pending State legislation.

Codice del lavoro. Rome, Uffizio Speciale d'Informazioni Legali ed Amministrative, 1937. 1179 pp.

A thoroughly annotated compilation of Italian labor laws enacted and in force through 1936.

Court decisions on teacher tenure reported in 1936. Washington, National Education Association, 1201 Sixteenth Street, NW., 1937. 35 pp.

Labor Organization

Industrial unionism in the American labor movement. By Theresa Wolfson and Abraham Weiss. (In *New Frontiers*, League for Industrial Democracy, 112 East 19th Street, New York City, February 1937; 52 pp., chart.)

Brief historical review of the development of the principle of industrial unionism and its relation to the organized labor movement, and an analysis of the present status of industrial organization under the Committee for Industrial Organization. The bibliography contains the chief source material on the history of the American labor movement, and recent articles and books dealing with developments since 1935.

Laundry Industry

Survey of the laundry industry. New York, U. S. Works Progress Administration, Workers' Education Project, 305 Broadway, 1937. 17 pp.; mimeographed.

A study of the laundry industry in New York State, preceded by a discussion of the general characteristics of the industry. Data are included on the wages paid to woman workers in New York State laundries in recent years, especially as affected by legislation and court rulings.

Migration

The people of the drought States. By Conrad Taeuber and Carl C. Taylor. Washington, U. S. Works Progress Administration, Division of Social Research, 1937. 81 pp., maps. (Research Bulletin, Series V, No. 2.)

The second of a series of three bulletins devoted to the problems of the drought areas. It deals with the results of uncontrolled settlement and the movement of people in the areas.

Restless Americans. By Clifton T. Little. Washington, Public Affairs Committee, 1936. 32 pp. (Public Affairs Pamphlet No. 9.)

Discusses today's need for migration; the control and guidance of migration; the need of research and analysis in solving the migration problem; and the prospects for employment in agriculture, forestry, mining, manufacturing, and professional and public service.

Minimum Wage

Minimum-wage law of Washington State. Washington, U. S. Bureau of Labor Statistics, 1937. 3 pp. (Serial No. R. 567, reprint from May 1937 Monthly Labor Review.)

Mining Industry

Ad interim report of Chairman W. Jett Lauck and Commissioner James W. Angell of the [Pennsylvania] Anthracite Coal Industry Commission. [Philadelphia, Integrity Building], May 15, 1937. 45 pp.

Annual statistical summary of output, and of the costs of production, proceeds, and profits of the coal-mining industry [of Great Britain] for year ended December 31, 1936. London, Mines Department, 1937. Folder. (Cmd. 5427.)

Includes statistics of employment, wages, man-shifts worked, and productivity of coal-mine labor.

Report of the Commissioner of Mines to the Governor [of Alaska], for the biennium ended December 31, 1936. Juneau, 1937. 67 pp.

Includes data on labor conditions, trend of employment, production, and industrial accidents in the Alaskan mining industry.

Proceedings of the Transvaal Chamber of Mines at the annual general meeting held in Johannesburg, March 22, 1937. Johannesburg, 1937. 16 pp.

Sections show the increase in employment, additions to vacation allowances, and medical benefits. Information is also given on health and training.

Motion-Picture Industry

Motion pictures: Biennial Census, 1935. Washington, U. S. Bureau of the Census, 1936. 4 pp.; processed.

Although the production of motion pictures is not a manufacturing industry, it is surveyed by the Bureau of the Census because of its commercial importance. This latest study shows employment and pay rolls, number of establishments, and cost of production, by geographic areas.

Occupations

Changes in the occupational pattern of New York State. By Bradford F. Kimball. Albany, New York State Education Department, 1937. 188 pp., charts. (Educational Research Studies, 1937, No. 2.)

This study, based on 1910, 1920, and 1930 censuses, shows a marked trend away from manual types of occupations toward white-collar jobs. Over the two decades 1910 to 1930, clerks and kindred workers were the most rapidly expanding group, with professional workers ranking second. However, from 1920 to 1930 the professional group grew more rapidly than the group of clerks and kindred workers. In manual occupations, skilled workers showed the most rapid increase.

Occupational mobility in an American community [San Jose, Calif.] By Percy E. Davidson and H. Dewey Anderson. Stanford University, Calif., Stanford University Press, 1937. 203 pp., charts.

A sample of the male workers has been analyzed with regard to income, number of dependents, extent to which occupational status has been inherited, the role of schooling, and various other social-economic factors.

Prospective new fields of occupational opportunity. By John D. Beatty and others. Pittsburgh, Pittsburgh Personnel Association, 1937. 9 pp., charts.

Surveys briefly some of the technical and other developments taking place in the United States and other countries which will no doubt affect the labor market.

Personnel Management

How to be a good foreman. By Charles Reitell. New York, Ronald Press Co., 1937. 186 pp.

A textbook in the interest of managerial foremanship, dealing with three important aspects of the foreman's job—the human element, the technical requirements, and knowledge and use of costs and budgetary controls. Points covered in the discussion of the relation between foreman and workers are hiring and training procedure; good housekeeping methods and their connection with good working conditions and safety; worker interest; and adequate wages. Subjects for discussion by foremen's clubs, based on this book, are presented in an appendix.

The trend in personnel management, 1929-1936. By Donald S. Parks. Toledo, University of Toledo, College of Business Administration, 1936. 6 pp.; mimeographed. (Bulletin No. 1.)

A study of personnel practices, covering 86 firms located mainly in the Middle West.

Pocketbook Industry

A survey of the pocketbook industry in the United States. By Charles Stewart. New York, U. S. Works Progress Administration, Workers' Education Project, 305 Broadway, 1937. 23 pp., charts; mimeographed.

An outstanding feature of the report is the discussion of the migration of pocket-book shops from New York City. The data presented for the industry include number of establishments, number of wage earners, wages, value of product, and value added by manufacture, by States for 1931 and 1933, and for the country as a whole for 1935.

Productivity of Labor

Rapport présenté à l'assemblée générale ordinaire du 19 Mars 1937. Paris, Comité Central des Houillères de France, 35 rue Saint-Dominique, 1937. 22 pp.

Sections on mine-labor productivity in France are reviewed in this issue of the Monthly Labor Review.

Recreation

Play streets and their use for recreational programs. By Edward V. Norton. New York, A. S. Barnes & Co., 1937. 77 pp., diagrams.

An account of the program of supervised recreation on streets set off for play in a section of East Harlem, New York City. The report deals with the obstacles to the development of the program and how they were met, the activities which are adaptable to this kind of recreation, and the organization and set-up for such a program.

Social Security

La prévoyance sociale en Tchécoslovaquie du 1^{er} janvier 1933 au 31 décembre 1935. Prague, Ministère de la Prévoyance Sociale, 1936. 57 pp., maps, charts. (In French.)

Deals with labor legislation in 1934 and 1935; social insurance, covering sickness, invalidity, old-age pensions of employees in public and private employment, and industrial accidents; and welfare work for children and adolescents.

Rapport du Ministère du Travail [France] sur l'application de la loi des assurances sociales (statistiques du 1^{er} janvier 1934 au 31 décembre 1935). (In Journal Officiel de la République Française, Paris, April 18, 1937, pp. 139-254.)

Reviewed in this issue.

Reports on a children's charter and juvenile employment and unemployment to be presented by the standing joint committee of industrial women's organizations to the National Conference of Labor Women, Norwich, April 27, 28, and 29, 1937. London, Labor Party, Transport House, Smith Square, S. W. 1, [1937]. 48 pp.

The program of the British Labor Party dealing with legislation and social-welfare plans in the interest of infants, school children, and employed young persons.

Social welfare in Italy. By Fernando Gazzetti. Rome, Società Editrice di Novissima, 1936. 95 pp., illus.

An account, with some statistics through 1935, of the operation of the two national social-welfare institutions of Italy which administer compensation for industrial and agricultural accidents, invalidity and old-age-retirement benefits, and survivors', maternity, and tuberculosis insurance. These institutions are the Istituto Nazionale Fascista per la Previdenza Sociale, which looks to the prevention of social evils, and the Patronato Nazionale per l'Assistenza Sociale, which provides for their relief.

Technological Changes

Technology and the mineral industries. By F. G. Tryon and others. Washington, U. S. Works Progress Administration, 1937. 63 pp., charts. (National Research Project on Reemployment Opportunities and Recent Changes in Industrial Techniques, Mineral Technology and Output Per Man Studies, Report No. E-1.)

The effects upon employment of technological changes in the mineral industries are discussed in an article in this issue of the Review, based on information contained in the report here noted.

Textile Industry

Report of world conference on the social and economic problems of the textile industry, held in Washington, D. C., April 2-17, 1937. Ottawa, Canada, Department of Labor, 1937. 20 pp. (Supplement to Labor Gazette, May 1937.)

La conferencia textil de Washington (Abril 2 al 17 de 1937). By José Enrique de Sandoval. Habana, Carasa y Ca., S. en C., 1937. 91 pp.

An account of the background and proceedings of the World Textile Conference held in Washington, D. C., April 2 to April 17, 1937, written by the Cuban Government delegate for the information of his Government and to serve as a reference work in Spanish for the twenty-third session of the International Labor Conference, Geneva, June 3-23, 1937.

Recent developments in China's cotton industry. By Leonard G. Ting. Shanghai, China Institute of Pacific Relations, 123 Boulevard de Montigny, 1936. 43 pp.

Cotton cooperatives, labor efficiency, proportion of female labor, and average daily wages, in Chinese-owned cotton mills, are among the topics covered.

Unemployment Insurance and Relief

Unemployment compensation—what and why? Washington, U. S. Social Security Board, 1937. 57 pp. (Publication No. 14.)

The need for unemployment compensation is discussed from the standpoint of various types of recurring unemployment, including the unemployment occurring in cyclical depressions. A brief history of unemployment insurance in Great Britain and Germany is followed by a discussion of the developments leading up to the enactment of the Social Security Act in this country and of major questions to be considered in unemployment compensation, such as coverage, contributions, amount of benefits, and type of fund. There is a short bibliography.

First annual report of New Hampshire Unemployment Compensation Division, for year ending December 31, 1936, with additional data covering January 1, 1937, to February 15, 1937. Concord, Bureau of Labor, Unemployment Compensation Division, 1937. 39 pp., map, charts.

One year of W. P. A. in Pennsylvania, July 1, 1935-June 30, 1936. [Harrisburg?], Works Progress Administration for Pennsylvania, [1937?]. 186 pp., charts, illus.

Lehrbuch für arbeitseinsatz und arbeitslosenhilfe: Teil 1, Die unterstützende arbeitslosenhilfe und die statistik in der Reichsanstalt für Arbeitsvermittlung und Arbeitslosenversicherung. By Hans Ulrich and Theodor Galland. Berlin, Langewort, 1937. 275 pp.

Deals with unemployment relief, unemployment insurance, and employment service in Germany, including a short historical sketch of the struggle against unemployment.

Arbetslöshetshjälpen i Stockholm, 1935. Stockholm, Arbetslöshestskommitté og Statistiska Kontor, 1937. 54 pp.

Contains official information in regard to unemployment relief in the city of Stockholm, Sweden, in 1935. Summaries in English and French are provided, and there is a French translation of the table of contents.

Wages and Hours of Labor

Average hourly earnings in manufacturing, 1933 to 1936. By A. F. Hinrichs. Washington, U. S. Bureau of Labor Statistics, 1937. 31 pp. (Serial No. R. 542, reprint from April 1937 Monthly Labor Review.)

Hourly entrance rates of common laborers in 20 industries, July 1936. By Robert S. Billups. Washington, U. S. Bureau of Labor Statistics, 1937. 15 pp. (Serial No. R. 547, reprint from April 1937 Monthly Labor Review.)

Wages and hours in union bakeries, May 15, 1936. Washington, U. S. Bureau of Labor Statistics, 1937. 9 pp. (Serial No. R. 548, reprint from April 1937 Monthly Labor Review.)

Union scales of wages and hours of motortruck drivers, May 15, 1936. Washington, U. S. Bureau of Labor Statistics, 1937. 16 pp. (Serial No. R. 570, reprint from May 1937 Monthly Labor Review.)

Wages and employment conditions of union street-railway employees, May 15, 1936. Washington, U. S. Bureau of Labor Statistics, 1937. 77 pp. (Serial No. R. 549, reprint from April 1937 Monthly Labor Review.)

Wages, hours, and working conditions on river towboats. By Orrin R. Mann. Washington, U. S. Bureau of Labor Statistics, 1937. 6 pp. (Serial No. R. 558, reprint from May 1937 Monthly Labor Review.)

Time rates of wages and hours of labor in Massachusetts, 1936. Boston, Department of Labor and Industries, 1937. 80 pp. (Labor Bulletin No. 175.)

Total income during 1934 of gainful workers [in Michigan]. Lansing, State Emergency Welfare Relief Commission, 1937. 24 pp., charts. (Michigan Census of Population and Unemployment, first series, No. 6.) Reviewed in this issue.

Collection of wage claims by State labor offices. By Mary T. Waggaman. Washington, U. S. Bureau of Labor Statistics, 1937. 8 pp. (Serial No. R. 560, reprint from May 1937 Monthly Labor Review.)

Welfare Work

Annual report of the Lake Carriers' Association, 1936. Cleveland, 1937. 184 pp. A section of this report is devoted to the welfare plan of the association, covering the savings plan, the educational program, library service, and benefits paid for accidental deaths.

Women in Industry

Women who work. By Joan Beauchamp. London, Lawrence & Wishart, 1937. 104 pp., illus.

This picture of the working conditions and social and economic status of British working women and housewives is drawn from census statistics, unemployment-insurance data, special studies made by various agencies, and records of the Women's Cooperative Guild and the Trades Union Congress.

Women's Garment Industry

The women's garment industry—an economic analysis. By Lazare Teper. New York, International Ladies' Garment Workers' Union, Educational Department, 1937. 40 pp.

A brief survey of the effects of competition and mechanical development upon the economic structure of the women's garment industry, and of the relations between the industry and its workers. The influence of style changes and seasonality on both the industry and its employees is among the points discussed. One appendix presents a description of the principal crafts involved in the production of women's wearing apparel, while another gives monthly data on employment, pay rolls, hours, and wages in the various branches of the industry for the years 1933, 1934, and 1935.

Youth Problems

Youth in action. (In Social Action, national organ of Council for Social Action, New York, 289 Fourth Avenue, May 1, 1937. 31 pp.)

Discusses as youth problems the handicap of poverty, the lack of healthy play, the difficulty of education, the dead end of unemployment, and the threat of war.

The youth movement in Italy. By D. S. Piccoli. Rome, Società Editrice di Novissima, [1936?]. 102 pp., illus.

Gives the rules, regulations, and programs of various youth groups in Italy, and reports on their activities.

General Reports

Report of the Iowa Bureau of Labor for the biennial period ending June 30, 1936.
Des Moines, 1936. 25 pp.

Factory inspection, industrial accidents, child labor, the State employment service, fee-charging employment offices, experience in employment of handicapped persons during the period of N. R. A. operation, and recommended legislation, are reported upon.

Twenty-sixth biennial report of the Nebraska Department of Labor, June 1, 1935, to December 1, 1936. Lincoln, [1937?]. 19 pp.

Gives information on factory inspection, wage collection, ventilation in theater booths to eliminate hazard of carbon-monoxide poisoning, the State employment service, and child labor.

The municipal year book, 1937. Edited by Clarence E. Ridley and Orin F. Nolting. Chicago, International City Managers' Association, 1937. 599 pp.

A compilation of articles by experts in their respective fields. Housing, administration of relief, and purchasing power of municipal employees are among the subjects covered.

Canada. By André Siegfried; translated from the French by H. H. Hemming and Doris Hemming. London, Jonathan Cape, 1937. 315 pp., maps.

Describes the international position of Canada in the economic and political setting of the present century, its place in world markets, its cultural potentialities, and its role of interpreter between the United States and England.

The volume includes some data on labor, wages, agricultural prices, immigration, and emigration.

Anuario estadístico de Chile, año 1935: Vol. VI, Finanzas, bancos, y cajas sociales.
Santiago de Chile, Dirección General de Estadística, 1936. 120 pp.

The sections of the report of interest to labor contain the financial report of government-administered social insurance for salaried and wage-earning employees; salaries of private, semiofficial, and municipal employees, by Province and by sex; pay-roll totals, by month, industry, and district; operation of the labor exchange; and index numbers of purchasing power of day wages.

Upswing without prosperity? Some notes on the development in the lower income classes in Germany. (Supplement to Weekly Report of German Institute for Business Research, Berlin, February 24, 1937; 6 pp.)

Income, employment, unemployment, and cost of living are considered in relation to the present economic situation in Germany.

Annuaire statistique Hongrois, 1935. Budapest, Office Central Royal Hongrois de Statistique, 1937. 464 pp. (In French.)

Statistical yearbook for Hungary for 1935, including data on accidents to agricultural workers, activities of employment offices, unemployment among trade-unionists, social insurance, industrial accidents, industrial disputes, unemployment-relief measures, wages, and working hours. Some of the data on wages and hours are given in this issue of the Monthly Labor Review.

Il mercato edilizio, dati riassuntivi sull'andamento del mercato edilizio nel 1935.
Rome, Federazione Nazionale Fascista dei Proprietari di Fabbricati, 1937. xiv, 179 pp.

Contains data on cost of construction of dwellings of various types, wages and unemployment in the building industry, rents, and cost of gas, electricity, and water service, in Italy.

Storia economica dell'Italia nel medio evo. By Alfred Doren. Milan, Università Commerciale Luigi Bocconi, 1936. 649 pp. (Annali di Economia, Vol. XI.)

An Italian translation of the German book *Wirtschaftsgeschichte Italiens im Mittelalter* (Economic history of Italy in the Middle Ages). There is a well-documented discussion of the question of labor demand and supply in the Middle Ages and in the early period of capitalist economy. A bibliography of 30 pages is appended.

Expansion of Japan's foreign trade and industry. Washington, U. S. Bureau of Foreign and Domestic Commerce, 1937. 72 pp. (Trade Information Bulletin No. 836.)

Some data are included on wages, cost of living, and standards of living in Japan.

La politique sociale en Pologne, 1918-1936. Warsaw, Ministère de l'Assistance Sociale, 1936. 213 pp. (In French.)

Historical review of labor and social policies in Poland, including information on legislation, unemployment, unemployment relief, and various forms of social insurance.